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San Francisco
Department of Public Health

HIV/AIDS Epidemiology Annual Report 2003

HIV/AIDS Statistics and Epidemiology Section

HIV/AIDS Epidemiology Annual Report

2003

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Contents

Contents i
List of Figures and Tables ii
Executive Summary vi
1. Overview of HIV/AIDS in San Francisco 1
2. Trends in AIDS Incidence 4
3. Survival among Persons with AIDS 9
4. Trends in AIDS Mortality 13
5. Persons Living with AIDS 17
6. Use of HAART among Persons Living with AIDS 18
7. Insurance Status at Time of AIDS Diagnosis 19
8. HIV/AIDS among Men Who Have Sex with Men 20
9. HIV/AIDS among Injection Drug Users 26
10. HIV/AIDS among Heterosexuals 28
11. HIV/AIDS among Women 31
12. HIV/AIDS among Adolescents and Young Adults 33
13. HIV/AIDS among Children 34
14. HIV/AIDS among Transgender Persons 37
15. Homeless Persons with AIDS 39
16. Sexually Transmitted Diseases among Persons with AIDS 40
Technical Notes 41
Data Tables 43

List of Figures and Tables

1. Overview of HIV/AIDS in San Francisco

Table 1.1 Characteristics of cumulative AIDS cases in San Francisco, California, and the United States 1

Table 1.2 Cumulative AIDS cases by gender, exposure category, and race/ethnicity, diagnosed through December 2003, San Francisco 2

Figure 1.1 AIDS cases, deaths, and prevalence, San Francisco, 1980-2003 3

2. Trends in AIDS Incidence

Figure 2.1 Number of AIDS cases by race/ethnicity, San Francisco, 1994-2003 4

Figure 2.2 Male annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1994-2003 5

Figure 2.3 Female annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1994-2003 5

Figure 2.4 Number of male AIDS cases by exposure category, San Francisco, 1994-2003 6

Figure 2.5 Number of female AIDS cases by exposure category, San Francisco, 1994-2003 6

Table 2.1 AIDS cases by gender and age at diagnosis, diagnosed 1993-2003, and cumulative totals through December 2003, San Francisco 7

Map 2.1 Distribution of AIDS cases diagnosed in San Francisco, 2002-2003 8

3. Survival among Persons with AIDS

Figure 3.1 Kaplan-Meier survival curves for persons diagnosed with AIDS in 1980-1989, 1990-1995, and 1996-2003, San Francisco 9

Figure 3.2 Kaplan-Meier survival curves for persons diagnosed with AIDS between 1996 and 2003 by race/ethnicity, San Francisco 10

Figure 3.3 Kaplan-Meier survival curves for persons diagnosed with AIDS between 1996 and 2003 by risk, San Francisco 11

Figure 3.4 Kaplan-Meier survival curves for persons diagnosed with AIDS between 1996 and 2003 by gender, San Francisco 12

4. Trends in AIDS Mortality

Table 4.1 Deaths in persons with AIDS, by gender, race/ethnicity, and risk, San Francisco, 2000-2003 13

Figure 4.1 Death rates due to HIV/AIDS-related and non-HIV/AIDS-related causes among persons with AIDS, San Francisco, 1993-2001 14

Table 4.2 Underlying causes of death among persons with AIDS, San Francisco, 1993-2001 ...15

Table 4.3 Multiple causes of death among persons with AIDS, San Francisco, 1993-2001 16

5. Persons Living with AIDS

Table 5.1 Persons living with AIDS by demographic and risk characteristics, San Francisco, 2000-2003 17

6. Use of HAART among Persons Living with AIDS

Figure 6.1 Use of HAART among persons living with AIDS, San Francisco, 1995-2003 18

Figure 6.2 Use of HAART among persons living with AIDS by gender, race/ethnicity, and risk, San Francisco, December 2003 18

7. Insurance Status at Time of AIDS Diagnosis

Figure 7.1 Trends in insurance status among persons with AIDS by gender, San Francisco, 1998-2003 19

Figure 7.2 AIDS cases by gender and insurance status at diagnosis, San Francisco, 1998-2003 ...19

8. HIV/AIDS among Men Who Have Sex with Men

Figure 8.1 AIDS cases, deaths, and prevalence among MSM, San Francisco, 1994-2003 20

Figure 8.2 AIDS cases among MSM by race/ethnicity, San Francisco, 1994-2003 20

Figure 8.3 HIV incidence among MSM seeking anonymous HIV testing, San Francisco, 1997 - 2003 21

Figure 8.4 Percent of MSM reporting UAI with a partner known to be HIV-positive, anonymous testing sites, San Francisco, 1998 - 2003 21

Figure 8.5 Percent of MSM reporting UAI by self-reported HIV status in the last six months, the Stop AIDS Project, San Francisco, 1998-2003 22

Figure 8.6 Percent of MSM reporting UAI with at least one partner of unknown HIV status in the last six months, the Stop AIDS Project, San Francisco, 1998-2003 22

Figure 8.7 Trends in UAI, potentially serodiscordant UAI and UVI among MSMW and MSM, the Stop AIDS Project, San Francisco, July 1998 - June 2003 23

Figure 8.8 Male rectal gonorrhea and male gonococcal proctitis among MSM, San Francisco, 1997-2003 24

Figure 8.9 Syphilis among MSM, San Francisco, 1997-2003 25

9. HIV/AIDS among Injection Drug Users

Figure 9.1 AIDS cases, deaths, and prevalence among non-MSM IDU, San Francisco, 1994 - 2003 26

Figure 9.2 AIDS cases among non-MSM IDU by race/ethnicity, San Francisco, 1994-2003 26

Table 9.1 Injection drug use-associated AIDS cases by exposure category and race/ethnicity, diagnosed through December 2003, San Francisco 27

10. HIV/AIDS among Heterosexuals

Figure 10.1 AIDS cases, deaths, and prevalence among heterosexuals, San Francisco, 1994-2003 .28

Figure 10.2 AIDS cases among heterosexuals by race/ethnicity, San Francisco, 1994-2003 28

Table 10.1 AIDS cases among heterosexuals by exposure category and gender, diagnosed through December 2003, San Francisco 29

Figure 10.3 HIV prevalence rate among blood donations, San Francisco Bay Area, 1985- 2003 ...29

Figure 10.4 Syphilis among heterosexual men, San Francisco, 1997- 2003 30

Figure 10.5 Syphilis among women, San Francisco, 1997- 2003 30

11. HIV/AIDS among Women

Figure 11.1 AIDS cases, deaths, and prevalence among women, San Francisco, 1994-2003 31

Figure 11.2 Female AIDS cases by race/ethnicity, San Francisco, 1994-2003 31

Figure 11.3 Female AIDS cases diagnosed through December 2003 and female population by race/ethnicity, San Francisco 32

Figure 11.4 Female AIDS cases diagnosed through December 2003 by risk, San Francisco 32

Table 11.1 HIV prevalence among women seeking elective pregnancy termination, San Francisco, August 2002-July 2003 32

12. HIV/AIDS among Adolescents and Young Adults

Table 12.1 Adolescent and young adult AIDS cases by risk, gender, and race/ethnicity, diagnosed through December 2003, San Francisco 33

13. HIV/AIDS among Children

Figure 13.1 Pediatric AIDS cases by year of diagnosis, San Francisco, 1980-2003 34

Table 13.1 Infants born to HIV-infected mothers by infant's HIV status and race/ethnicity, San Francisco, through December 2003 35

Figure 13.2 Infants born to HIV-infected mothers by year of birth and infant's HIV status, San Francisco, 1994-2003 36

Figure 13.3 Percent of HIV-infected mothers and their infants receiving antiretroviral therapy, San Francisco, 1995-2003 36

14. HIV/AIDS among Transgender Persons

Table 14.1 Characteristics of transgender AIDS cases and cumulative AIDS cases diagnosed through December 2003, San Francisco 37

Table 14.2 Knowledge of HIV reporting regulations among male to female transgenders, the HIV Testing Survey, San Francisco 38

15. Homeless Persons with AIDS

Table 15.1 Characteristics of homeless AIDS cases and AIDS cases diagnosed between 1994 and 2003, San Francisco 39

Figure 15.1 Number and percent of homeless AIDS cases by year of diagnosis, San Francisco, 1994-2003 39

16. Sexually Transmitted Diseases among Persons with AIDS

Figure 16.1 Number of AIDS cases diagnosed with an STD by year of STD diagnosis, San Francisco, 1991-2002 40

Executive Summary

The HIV/AIDS epidemic has taken another turn in San Francisco. Previously, we reported that HIV transmission was resurgent among men who have sex with men (MSM) in the late 1990s. Our conclusion was based on rising trends in sexual risk behavior, sexually transmitted diseases (STDs), and, in several studies, HIV incidence itself. We now detect a more complex pattern in the HIV epidemic.

New data suggest that HIV incidence has leveled off in the past few years. Application of the Serological Testing Algorithm for Recent HIV Seroconversion (STARHS) to specimens collected at the anonymous and the STD clinic testing sites finds that recent infection peaked in 1999. From 1999 to 2003, HIV incidence has stabilized. In contrast, male rectal gonorrhea and syphilis continues to increase among MSM. The rises in STDs are paralleled by overall increases in unprotected anal sex.

Increases in "serosorting" (the hypothesis that persons are selectively seeking sexual partners of the same HIV serostatus) might explain the apparent contradiction in rising STDs and sexual risk behavior yet stable HIV incidence. Behavioral data support this hypothesis. Although the proportion of MSM reporting unprotected anal sex increased through 2003, unprotected anal sex with partners of unknown HIV serostatus decreased. The data suggest that MSM have fewer partners in which HIV transmission might occur or they are using condoms when the partner is of opposite or unknown HIV serostatus. Further, data from testing sites indicate a decline in the proportion of HIV-negative MSM reporting unprotected anal sex with partners known to be HIV-positive, but only in the receptive position.

Taken together, findings point to the emergence of HIV prevention strategies that include partner selection, condom use, and sexual practices according to the partners' serostatus. The widespread use of HAART may also dampen HIV incidence as lower viral loads translate into lower risk of transmission. Unfortunately, these strategies are not perfect. They depend on knowledge of one's own and one's partners HIV serostatus and calculated but unknown risks on the likelihood of transmission. Indeed, it is cause for concern that HIV incidence has plateaued rather than achieving a downward trend.

Meanwhile, there are other encouraging trends in San Francisco. Unlike other parts of the United States, new AIDS cases continue to decline in 2003. For many years, San Francisco had the highest rate of AIDS in the nation. In 2002, we ranked 12th. Coverage of HIV treatment is high and AIDS deaths continue to decline. HIV remains relatively rare among heterosexuals, blood transfusion recipients, and children.

These successes should not be taken for granted. HIV care for persons living with HIV requires considerable resources and may be threatened in budget-constrained times. HIV prevalence remains high among MSM, MSM injection drug users, and male-to-female transgendered persons and moderately high among other injection drug users. Recently, the Centers for Disease Control and Prevention announced an overarching objective of cutting HIV incidence in half. Prevention will need to be enhanced if this goal is to be achieved in our city.

1 Overview of HIV/AIDS in San Francisco

As of December 31, 2003, a cumulative total of 29,056 AIDS cases were diagnosed in San Francisco (Table 1.1). This comprises 22% of California AIDS cases and three percent of cases reported nationally. As of December 2002, San Francisco ranked third in the cumulative number of AIDS cases among metropolitan areas nationwide. Compared to California and the United States as a whole, AIDS cases in San Francisco are more likely to be male, white, and to occur among men who have sex with men (MSM), including MSM who also inject drugs (MSM IDU).

Table 1.1 Characteristics of cumulative AIDS cases in San Francisco, California, and the United States#

	San Francisco (N = 29,056)		California (N = 133,858)	United States (N = 859,000)
	Number	%	%	%
Gender				
Male	27,588	95%	92%	82%
Female	1,160	4%	8%	18%
Transgender*	308	1%	--	--
Race/Ethnicity				
White	21,281	73%	58%	41%
African American	3,596	12%	18%	39%
Latino	3,145	11%	21%	18%
Asian/Pacific Islander	876	3%	2%	<1%
Native American	146	1%	<1%	<1%
Other/Unknown	12	<1%	<1%	<1%
Exposure Category				
MSM	22,148	76%	68%	45%
IDU	2,093	7%	11%	24%
MSM IDU	3,827	13%	9%	6%
Heterosexual	428	1%	5%	12%
Transfusion/Hemophilia	273	1%	2%	2%
Other/Unidentified	287	1%	5%	11%

San Francisco data are reported through March 25, 2004 for cases diagnosed through December 2003; California data are reported through December 2003; U.S. data are reported through December 2002.

* Transgender data are not reported by California and the United States. See Technical Notes "Transgender Status."

In San Francisco, MSM account for the majority of male AIDS cases within all race/ethnic groups (Table 1.2). Among African American men, heterosexual injection drug use is the second most frequent exposure category while MSM IDU represents the second most frequent exposure category among men of all other race/ethnic groups and particularly prominent among Native American men. One percent or less of men with AIDS acquired HIV infection through heterosexual contact.

The most frequent exposure category among white, African American , and Native American women with AIDS is injection drug use, followed by heterosexual contact. Among Latinas, almost equal percentages of women acquired their HIV infection through injection drug use as through heterosexual contact. Among Asian/Pacific Islander women, 44% acquired their infection through heterosexual contact, 29% through injection drug use, and 21% through transfusion of blood or blood products.

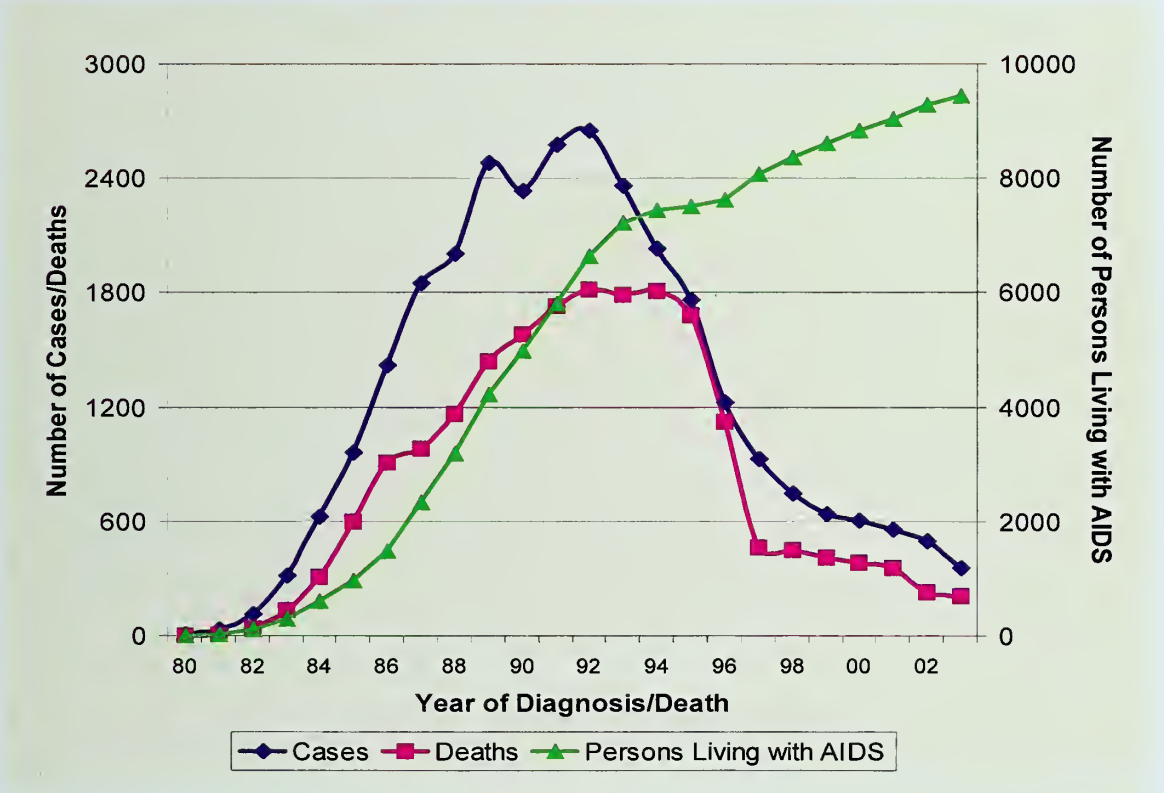
Table 1.2 Cumulative AIDS cases by gender, exposure category, and race/ethnicity, diagnosed through December 2003, San Francisco

	White		African American		Latino		Asian/Pacific Islander		Native American	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Male										
MSM	17,346	(83)	1,643	(55)	2,296	(79)	649	(84)	70	(54)
IDU	517	(2)	696	(23)	171	(6)	24	(3)	10	(8)
MSM IDU	2,697	(13)	537	(18)	329	(11)	49	(6)	48	(37)
Heterosexual	39	(<1)	36	(1)	19	(1)	7	(1)	0	(0)
Transfusion/ Hemophilia	107	(1)	18	(1)	30	(1)	27	(3)	0	(0)
Other/Unidentified	69	(<1)	55	(2)	66	(2)	21	(3)	2	(2)
Male Subtotal	**20,775**		**2,985**		**2,911**		**777**		**130**	
Female										
IDU	230	(56)	341	(67)	65	(44)	21	(29)	12	(92)
Heterosexual	115	(28)	118	(23)	59	(40)	32	(44)	1	(8)
Transfusion/ Hemophilia	46	(11)	17	(3)	13	(9)	15	(21)	0	(0)
Other/Unidentified	22	(5)	35	(7)	12	(8)	4	(6)	0	(0)
Female Subtotal	**413**		**511**		**149**		**72**		**13**	
Transgender	**93**		**100**		**85**		**#**		**#**	

There were a total of 30 transgender persons of Asian/Pacific Islander and Native American race/ethnicity. The number of transgender Native Americans with AIDS was less than five.

The number of new AIDS cases diagnosed in San Francisco peaked in 1992 at 2,648, reflecting a likely peak of new HIV cases in 1982, and has declined through 2003 (Figure 1.1). The decline in AIDS cases in San Francisco is in contrast to the nation as a whole which saw an increase in the number of estimated AIDS cases between 2001 and 2002. Deaths among persons with AIDS reached a plateau between 1992 and 1994, and declined thereafter. The sharpest decline in AIDS deaths occurred between 1995 and 1997, reflecting the impact of highly active antiretroviral therapies. By the end of 2003, there were 9,440 persons living with AIDS in San Francisco. Of note, mortality data for 2002 and 2003 are not yet complete. Additionally, there may be reporting delays for AIDS cases that were diagnosed in recent years.

Figure 1.1 AIDS cases, deaths, and prevalence, San Francisco, 1980-2003

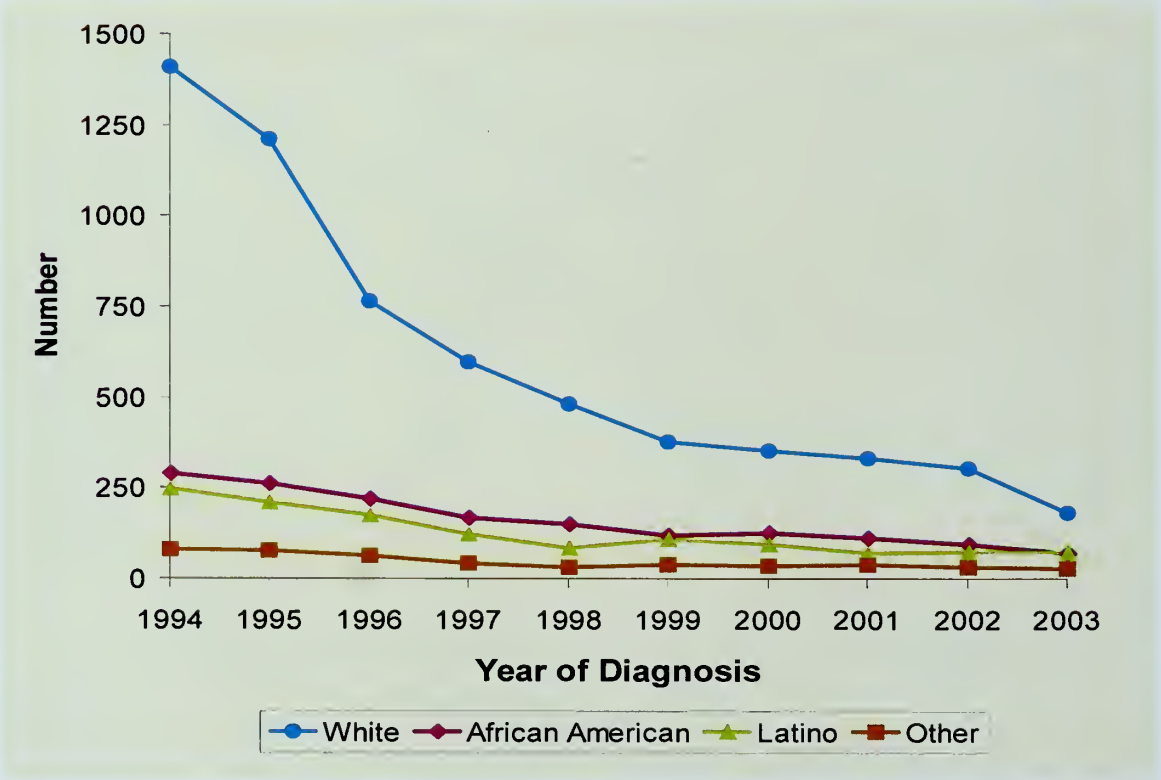


2 Trends in AIDS Incidence

Race/ethnicity

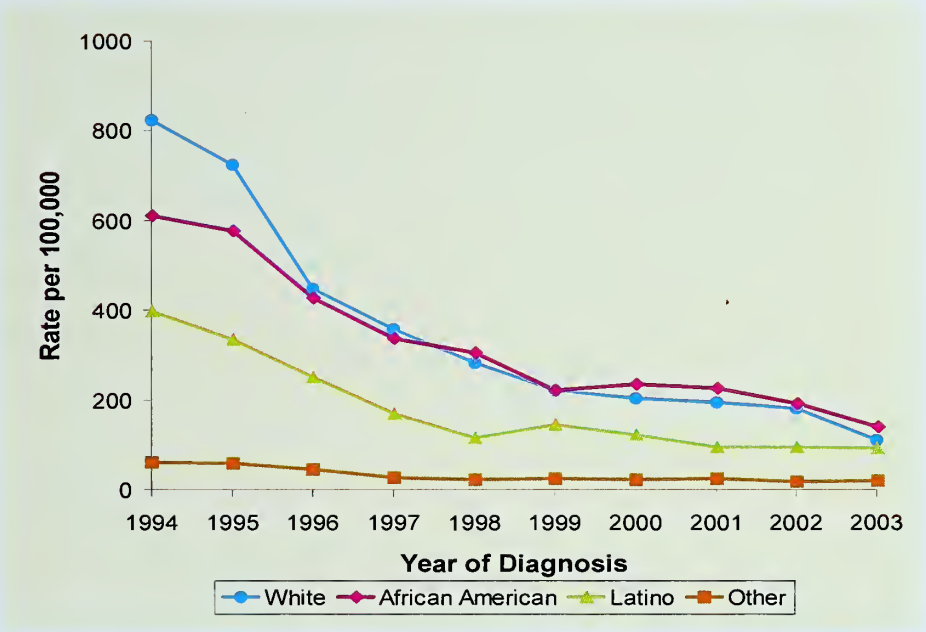
AIDS cases in San Francisco have occurred predominantly among whites (Figure 2.1). The number of AIDS cases has declined through 2003 among all race/ethnic groups with the exception of Latinos in which the number of Latino AIDS cases declined from 1994 through 2001 and has been stable through 2003. The distribution of AIDS cases by race/ethnicity remained relatively stable between 2000 and 2002. However, the proportion of Latino AIDS cases increased from 14% in 2002 to 21% in 2003.

Figure 2.1 Number of AIDS cases by race/ethnicity, San Francisco, 1994-2003



In 1998, the incidence rate of AIDS among African American men first exceeded that of white men and that difference has persisted through 2003. In 2003, the incidence rate of AIDS per 100,000 population was 139 among African American men, 110 among white men, and 93 among Latino men (Figure 2.2).

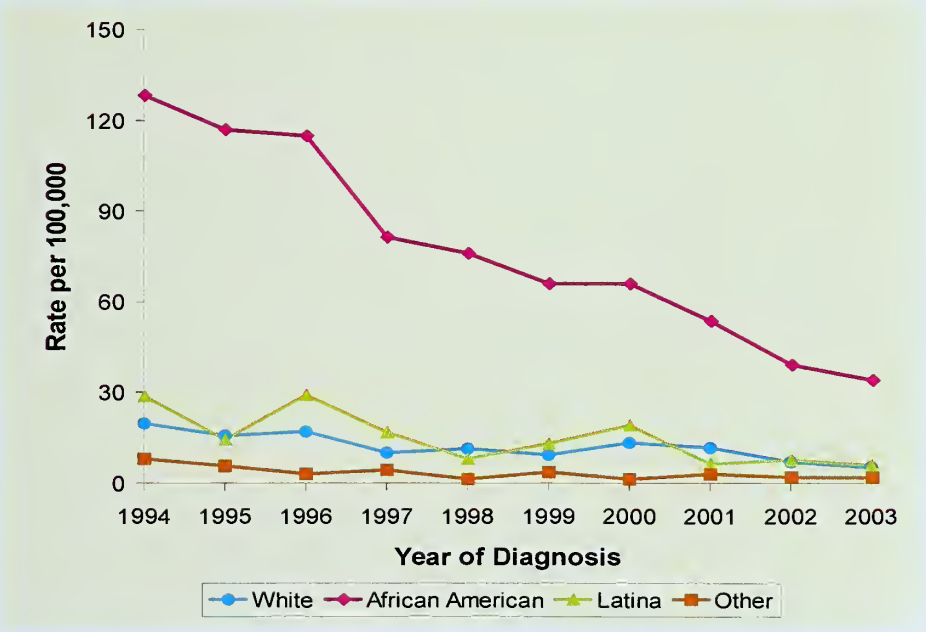
Figure 2.2 Male annual AIDS incidence rates* per 100,000 population by race/ethnicity, San Francisco, 1994-2003



* Excludes male-to-female transgender AIDS cases. See Technical Notes "Transgender Status" and "AIDS Incidence Rates" for rate calculations.

African American women have been disproportionately affected by AIDS throughout the epidemic. Although the incidence rate among African American women has declined from 66 per 100,000 in 2000 to 34 per 100,000 in 2003, it remains substantially higher than the rates among women of other races and ethnicities (Figure 2.3).

Figure 2.3 Female annual AIDS incidence rates* per 100,000 population by race/ethnicity, San Francisco, 1994-2003



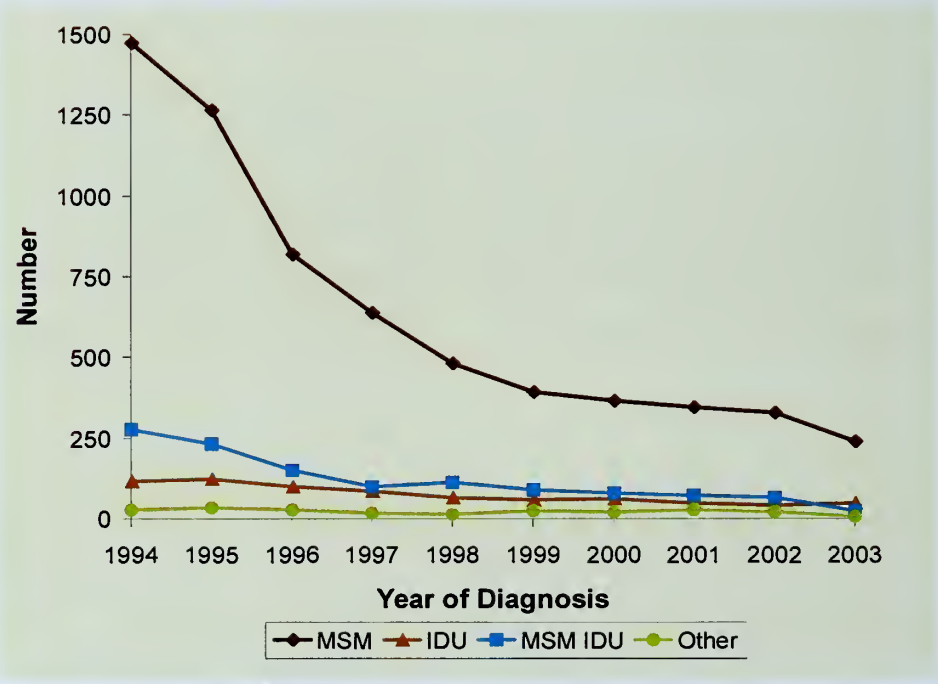
* Excludes female-to-male transgender AIDS cases. See Technical Notes "Transgender Status" and "AIDS Incidence Rates" for rate calculations.

Exposure category

The majority of male AIDS cases have occurred among MSM (Figure 2.4). Although the number of MSM AIDS cases has continued to decline through 2003, the percent of AIDS cases among MSM was stable at approximately 70% between 1999 and 2002 and increased to 75% in 2003. MSM IDU accounted for 8% of male AIDS cases in 2003, a decrease from 14% in 2002. Between 2002 and 2003, the number of male heterosexual IDU AIDS cases increased from 40 to 47, and the percent increased from 9% to 15%.

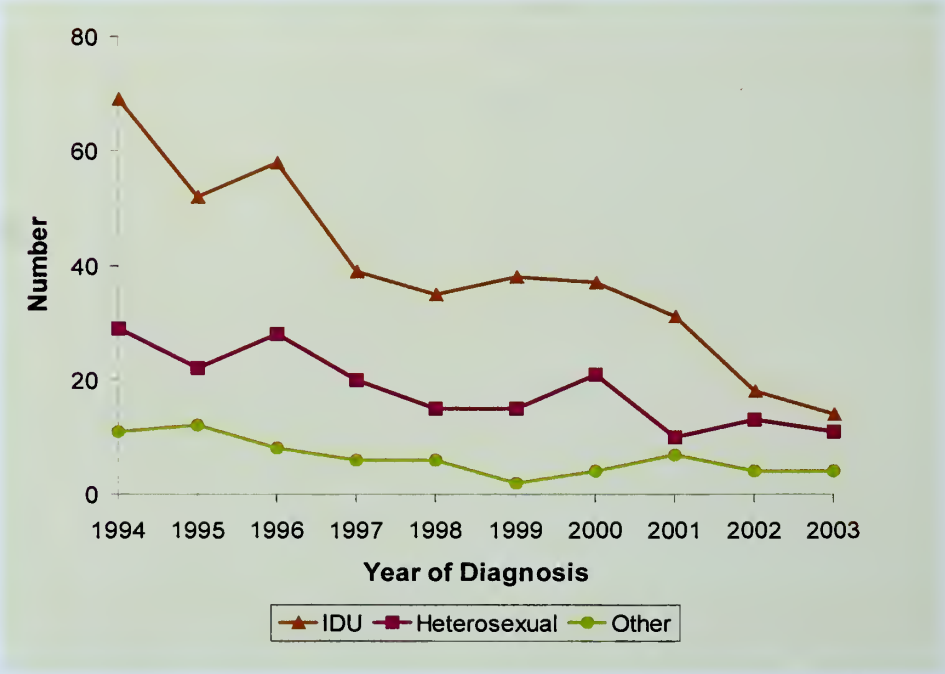
The predominant exposure category of AIDS cases among women is injection drug use, followed by heterosexual transmission (Figure 2.5). Both the number and percent of AIDS cases among women attributed to injection drug use have declined through 2003. In 2003, there were 14 female IDU diagnosed with AIDS which accounted for 48% of female AIDS cases in that year. AIDS cases attributed to heterosexual contact among women increased from 21% in 2001 to 38% in 2003. Nationwide, heterosexual contact was the predominant exposure category for female AIDS cases in 2002.

Figure 2.4 Number of male AIDS cases* by exposure category, San Francisco, 1994-2003



* Excludes male-to-female transgender AIDS cases. See Technical Notes "Transgender Status."

Figure 2.5 Number of female AIDS cases* by exposure category, San Francisco, 1994-2003



* Excludes female-to-male transgender AIDS cases. See Technical Notes "Transgender Status."

Age

The largest number of men and women with AIDS were diagnosed between ages 30 and 39 years (Table 2.1). AIDS has been diagnosed more frequently among younger women (aged 20-29 years) than among younger men. There is a small increase in the percentage of men and women diagnosed with AIDS in the older age groups (over 40 years) in recent years. This likely reflects the use of more effective therapies which have extended the time from acquiring HIV infection to the development of AIDS.

Table 2.1 AIDS cases by gender* and age at diagnosis, diagnosed 1993-2003, and cumulative totals through December 2003, San Francisco

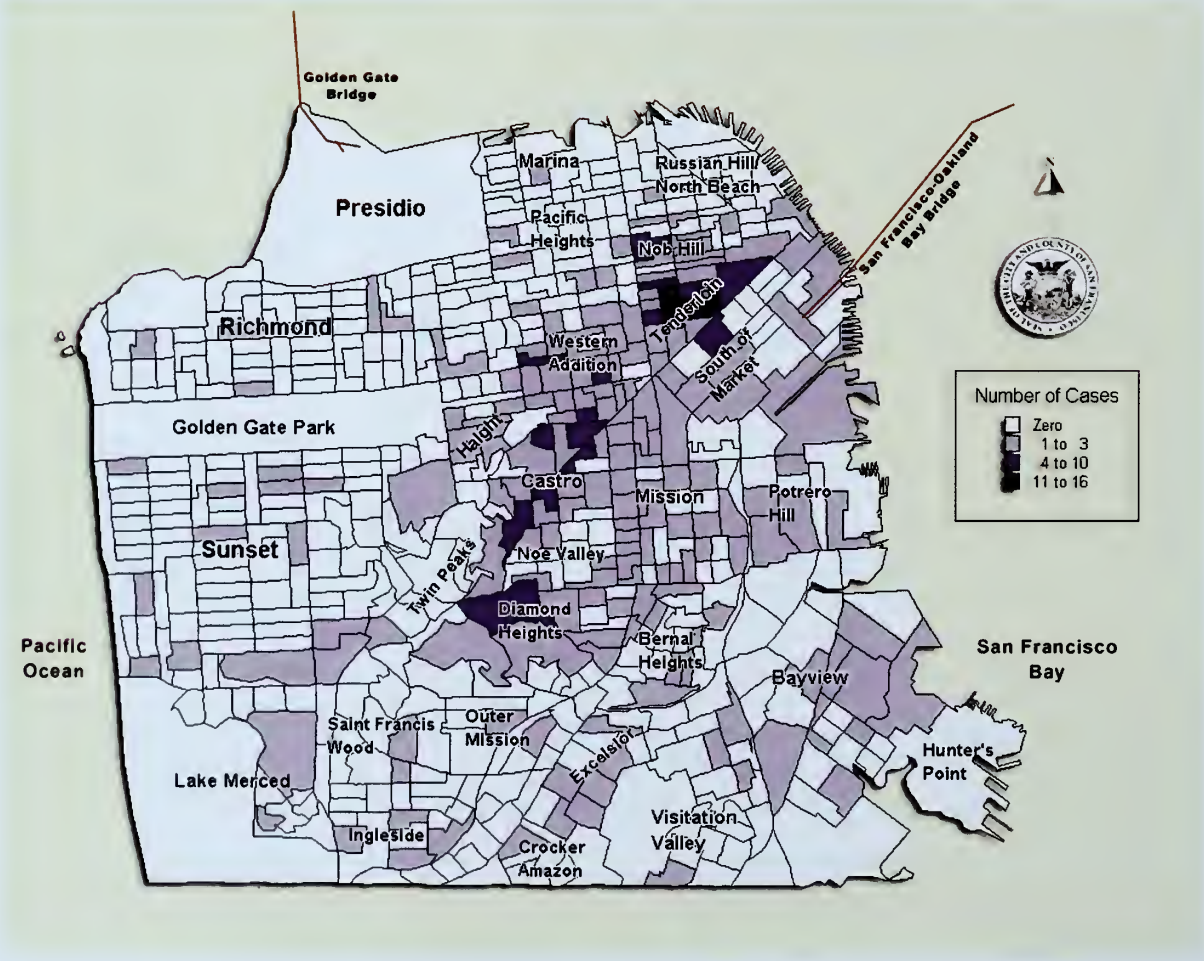
	1993-1995		1996-1999		2000-2003		Cumulative Totals	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Male								
0 - 19	13	(<1)	9	(<1)	6	(<1)	67	(<1)
20 - 29	626	(11)	301	(9)	137	(8)	3,146	(11)
30 - 39	2,569	(45)	1,367	(43)	714	(40)	12,611	(46)
40 - 49	1,901	(33)	1,067	(34)	614	(34)	8,574	(31)
50+	664	(12)	429	(14)	314	(18)	3,190	(12)
Male Subtotal	**5,773**	**(100)**	**3,173**	**(100)**	**1,785**	**(100)**	**27,588**	**(100)**
Female								
0 - 19	6	(2)	9	(3)	4	(2)	39	(3)
20 - 29	42	(14)	38	(14)	26	(15)	174	(15)
30 - 39	129	(43)	102	(38)	59	(34)	461	(40)
40 - 49	95	(31)	93	(34)	60	(34)	333	(29)
50+	30	(10)	28	(10)	25	(14)	153	(13)
Female Subtotal	**302**	**(100)**	**270**	**(100)**	**174**	**(100)**	**1,160**	**(100)**

* Excludes transgender cases. We cannot analyze temporal trends in AIDS cases by transgender status. This information was first collected in September 1996. See Technical Notes "Transgender Status."

Geographic distribution of new AIDS cases

Map 2.1 illustrates the geographic distribution of new AIDS cases (2002 through 2003) according to the residence of the patient at the time of diagnosis. Neighborhood levels of new AIDS cases can reflect the underlying prevalence of HIV infection as well as factors that affect the care and treatment of persons living with HIV. Two neighborhoods continue to account for the largest number of new AIDS cases: the Castro and the Tenderloin. The Castro, a largely upper socio-economic level neighborhood, is home to the highest concentration of MSM and MSM living with AIDS. In the Tenderloin, a predominantly lower socio-economic level neighborhood, a diversity of populations are affected by AIDS, including MSM, MSM-IDU, heterosexual male and female IDU, heterosexuals, and transgendered persons. Over time, the AIDS epidemic has shifted from the Castro to the Tenderloin. Other lower socio-economic level neighborhoods also have relatively high concentrations of new AIDS cases, including the Western Addition, South of Market, Bay View/Hunters Point, and Diamond Heights.

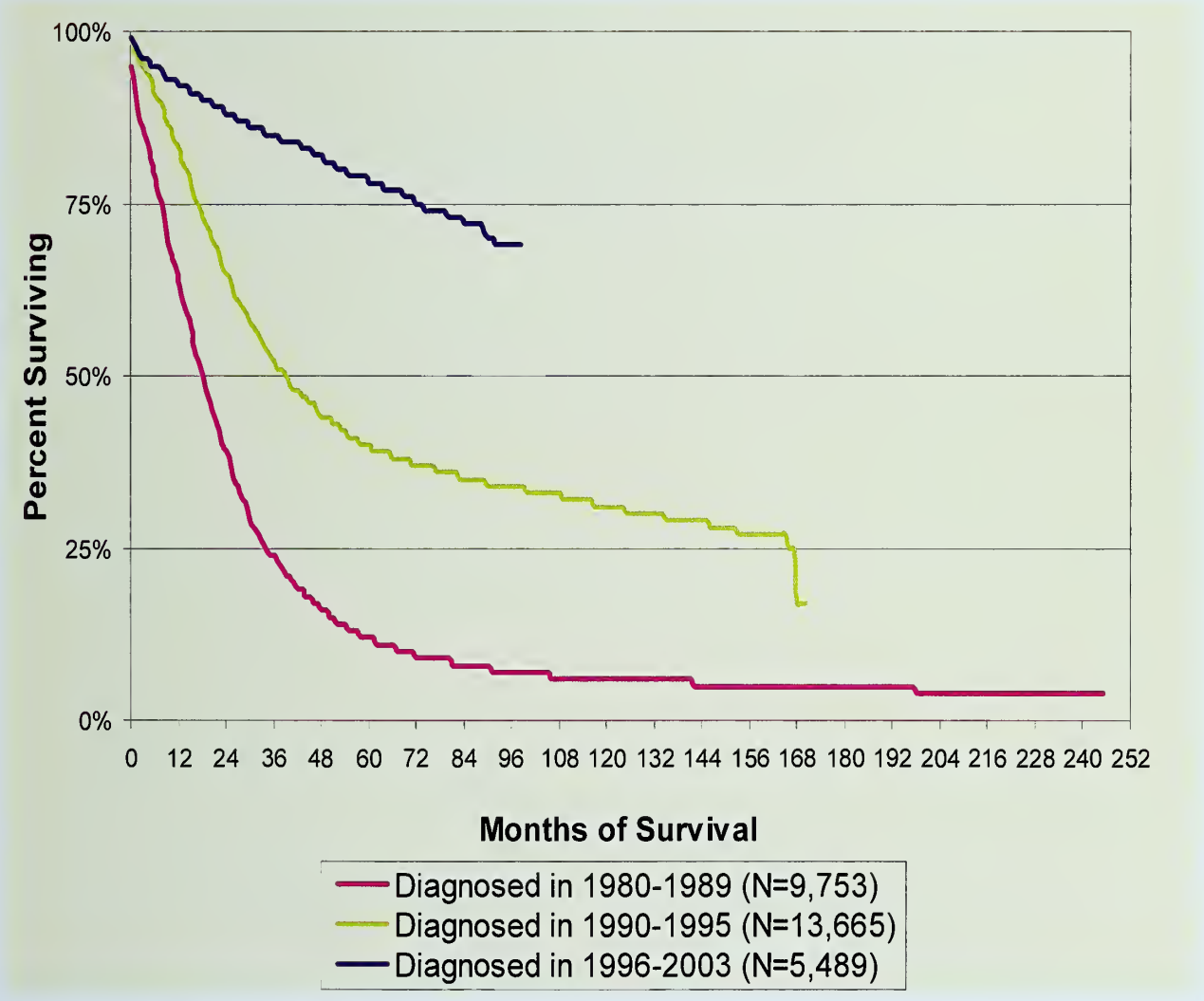
Map 2.1 Distribution of AIDS cases diagnosed in San Francisco, 2002-2003



3 Survival among Persons with AIDS

These Kaplan-Meier curves demonstrate the improved survival for persons diagnosed with AIDS in three time periods (Figure 3.1). Survival was poor for persons diagnosed early in the AIDS epidemic (1980-1989) (median survival of 18 months). However, survival has improved since then and for persons diagnosed between 1990 and 1995 the median survival was over three years (39 months). Approximately 70% of persons diagnosed with AIDS between 1996 and 2003 are still living. Improvements in survival with AIDS are attributable to more effective antiretroviral therapies.

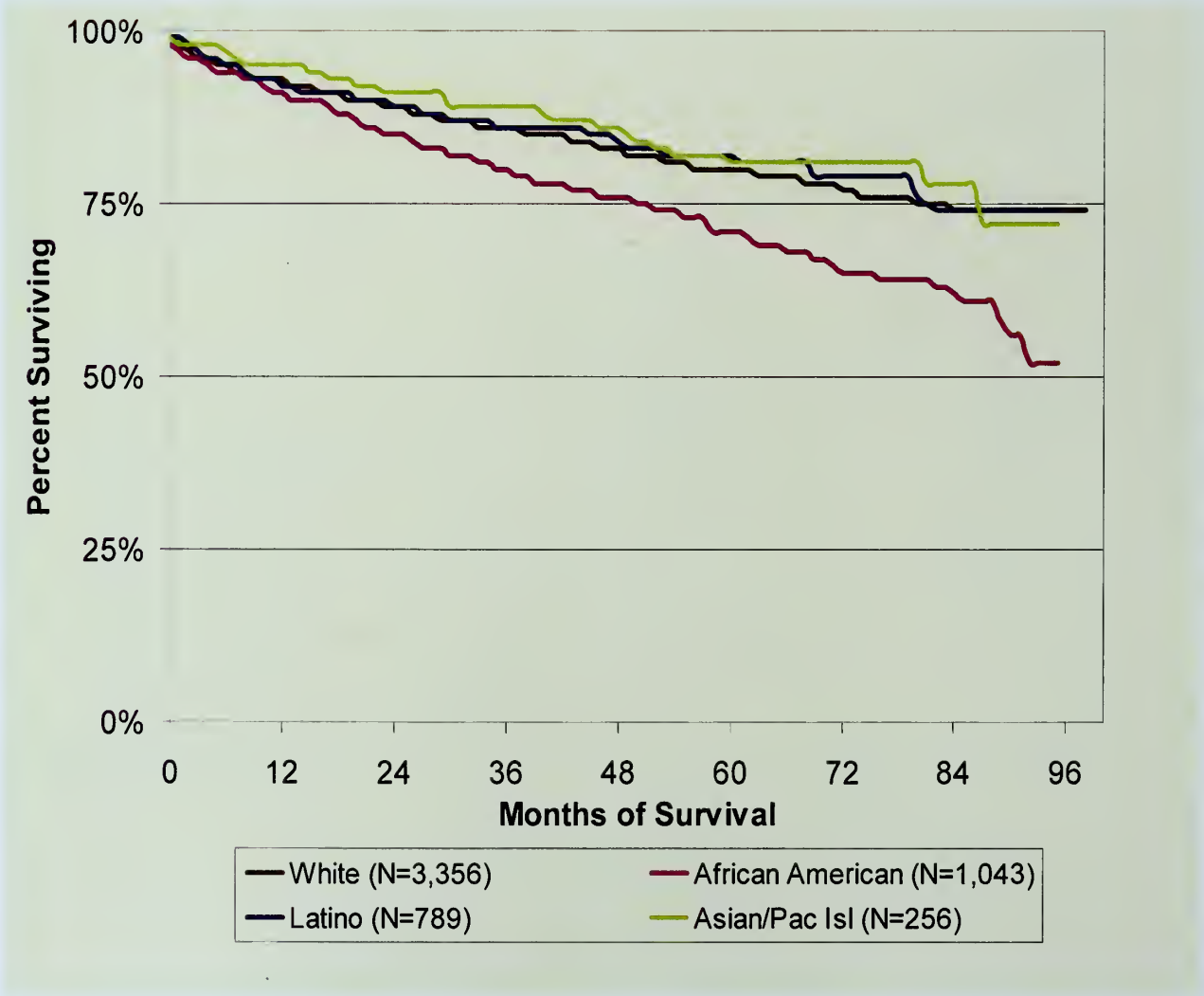
Figure 3.1 Kaplan-Meier survival* curves for persons diagnosed with AIDS in 1980-1989, 1990-1995, and 1996-2003, San Francisco



* See Technical Notes "AIDS Survival."

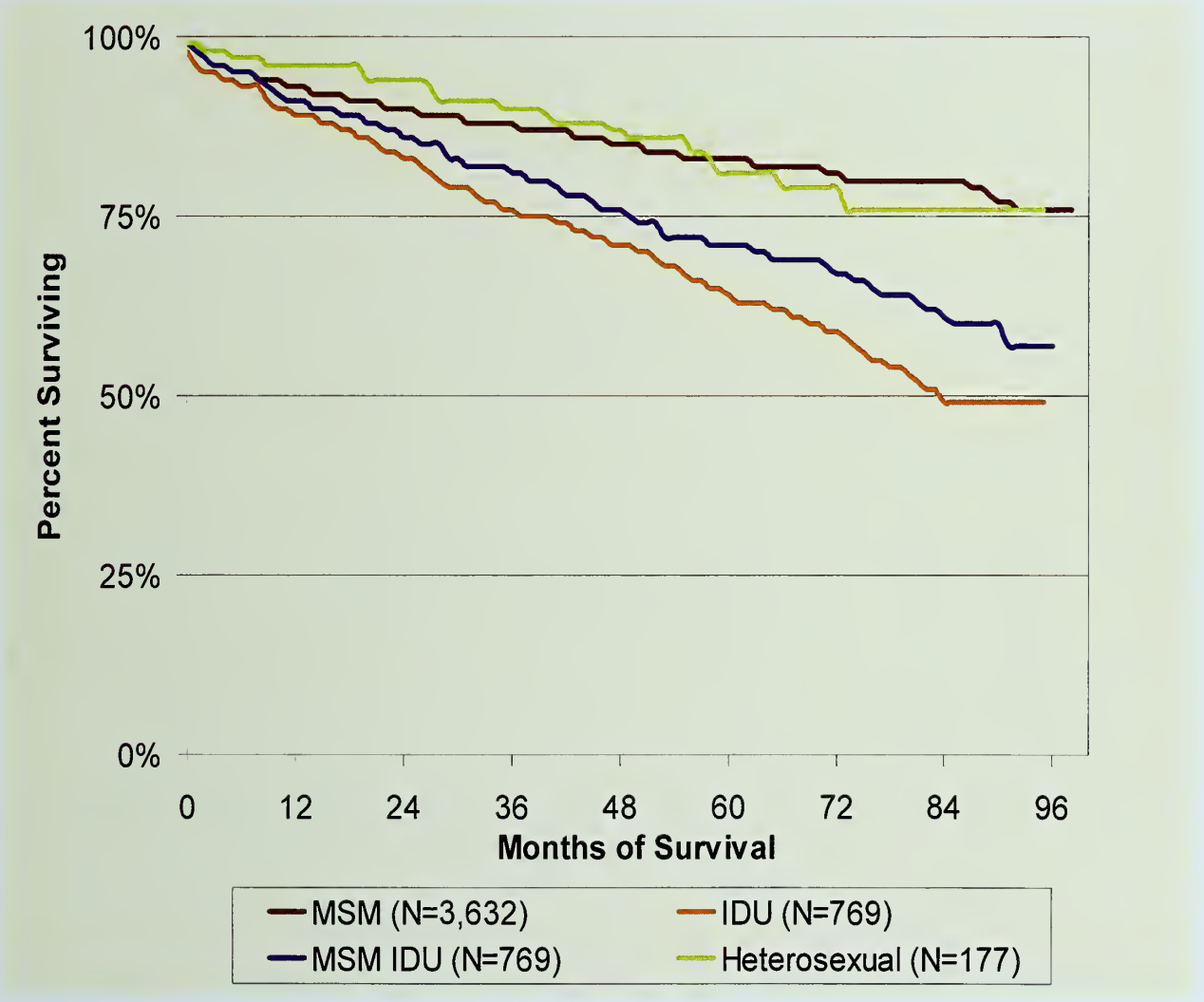
Although survival after AIDS diagnosis has improved in recent years for all racial and ethnic groups, relatively worse survival among African Americans has persisted (Figure 3.2). Among persons diagnosed between 1996 and 2003, the percent of African Americans surviving 72 months (six years) was 65%, compared to 77% of whites, 79% of Latinos, and 81% of Asians/Pacific Islanders. Although the survival differences are due in part to lower use of highly active antiretroviral therapies, the reasons for these differences are not entirely understood.

Figure 3.2 Kaplan-Meier survival curves for persons diagnosed with AIDS between 1996 and 2003 by race/ethnicity, San Francisco



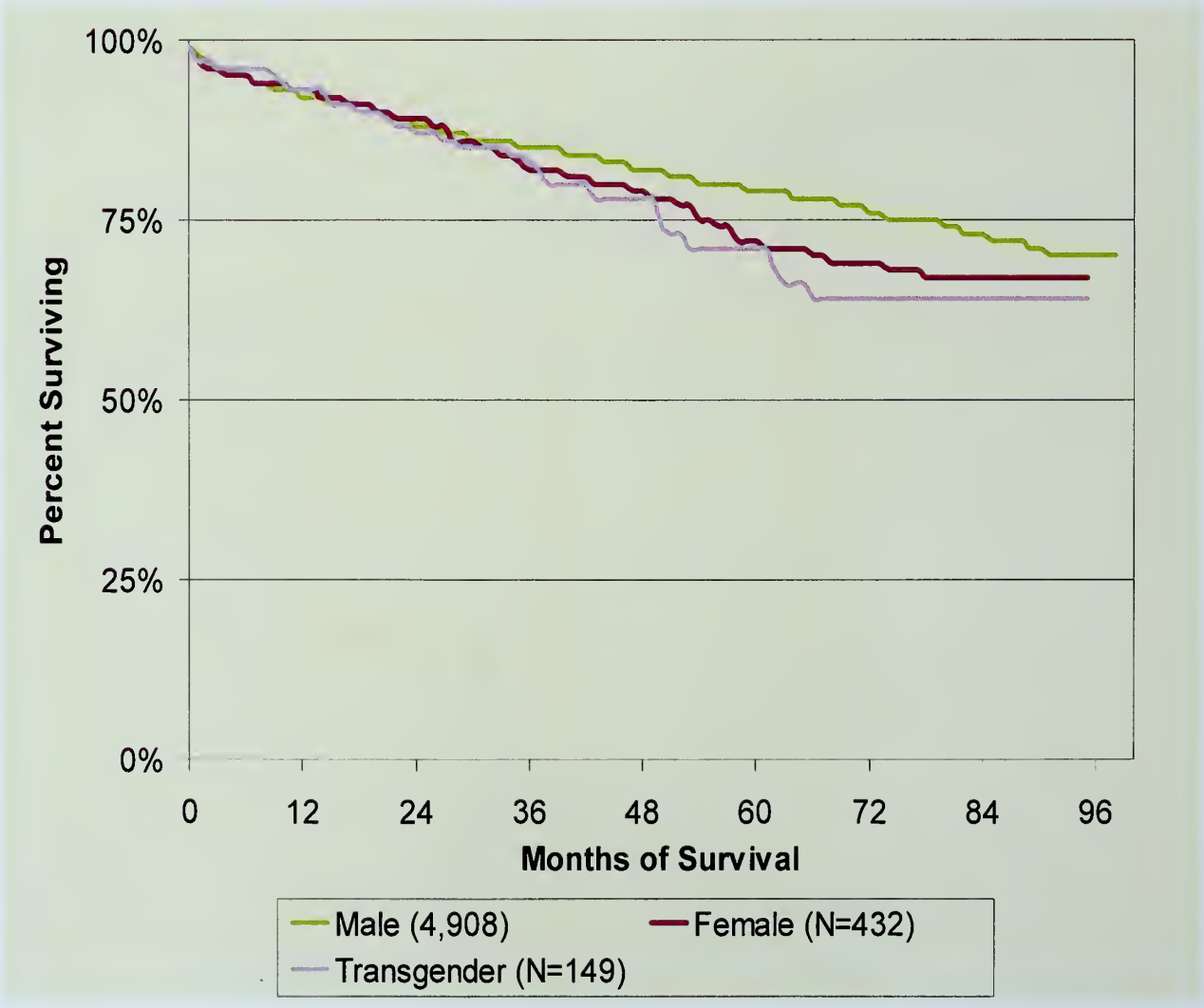
Survival after AIDS diagnosis has been better for MSM and heterosexuals compared to MSM IDU and heterosexual IDU (Figure 3.3). Eighty-one percent of MSM and 79% of heterosexuals survived 72 months (six years) after their AIDS diagnosis, compared to only 67% of MSM IDU and 59% of other IDU. Worse survival among IDU partly reflects higher death rates from causes associated with drug use such as overdose and suicide.

Figure 3.3 Kaplan-Meier survival curves for persons diagnosed with AIDS between 1996 and 2003 by risk, San Francisco



Seventy-six percent of men, 69% of women, and 64% of transgenders survived 72 months (six years) after AIDS diagnosis (Figure 3.4). These differences are consistent with lower use of HAART among women and transgenders compared to men.

Figure 3.4 Kaplan-Meier survival curves for persons diagnosed with AIDS between 1996 and 2003 by gender, San Francisco



4 Trends in AIDS Mortality

A total of 19,616 deaths have occurred among San Francisco AIDS cases as of December 31, 2003 (Table 4.1). The number of AIDS deaths declined between 2000 and 2003; however, reporting of deaths in recent years is not yet complete.

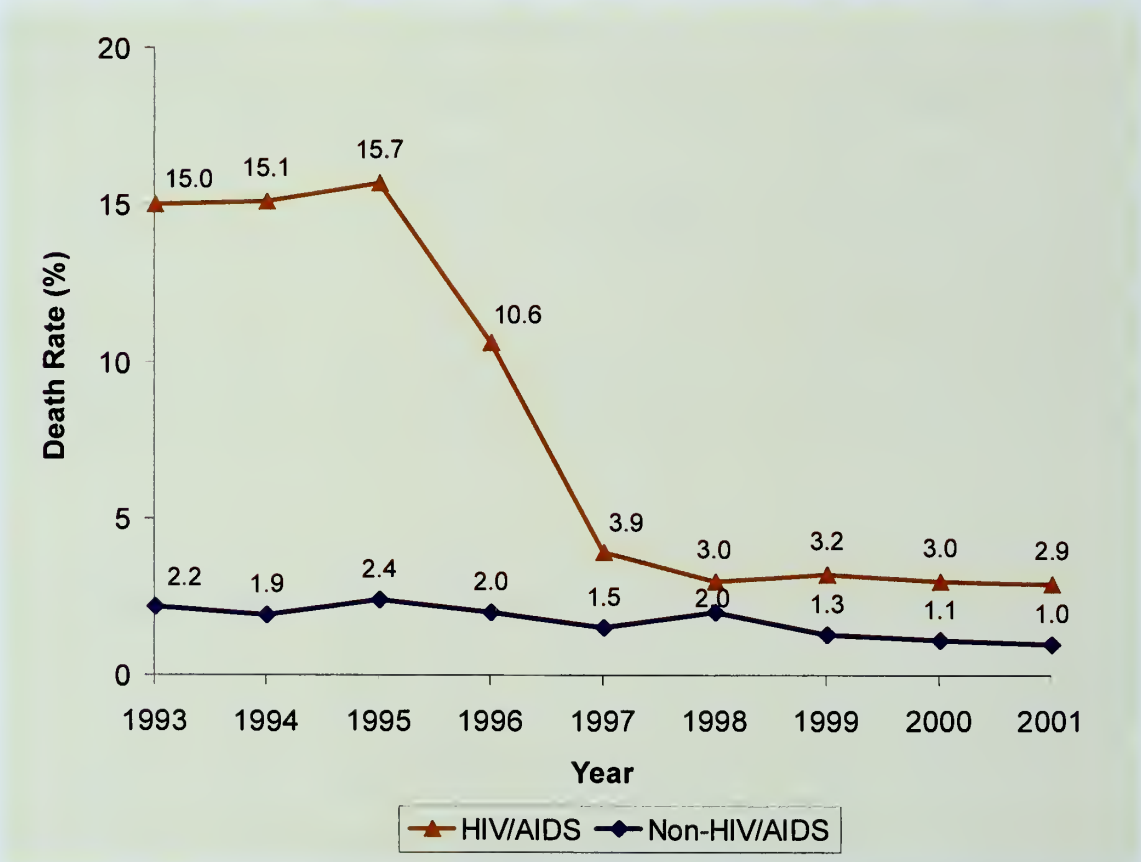
Table 4.1 Deaths in persons with AIDS, by gender, race/ethnicity, and risk, San Francisco, 2000-2003

	Year of Death								Cumulative Totals as of 12/31/2003
	2000		2001		2002*		2003*		
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	
Gender									
Male	341	(89)	311	(87)	203	(88)	184	(89)	18,879
Female	29	(8)	30	(8)	20	(9)	17	(8)	591
Transgender	12	(3)	15	(4)	9	(4)	5	(2)	146
Race/Ethnicity									
White	250	(65)	229	(64)	136	(59)	126	(61)	14,945
African American	84	(22)	77	(22)	56	(24)	48	(23)	2,240
Latino	32	(8)	41	(12)	32	(14)	21	(10)	1,859
Other	16	(4)	9	(3)	8	(3)	11	(5)	572
Risk									
MSM	230	(60)	205	(58)	124	(53)	104	(50)	15,213
IDU	55	(14)	65	(18)	45	(19)	41	(20)	1,209
MSM IDU	78	(20)	70	(20)	52	(22)	53	(26)	2,653
Heterosexual	6	(2)	8	(2)	7	(3)	6	(3)	189
Other/Unknown	13	(3)	8	(2)	4	(2)	2	(1)	352
Total	**382**	**(100)**	**356**	**(100)**	**232**	**(100)**	**206**	**(100)**	**19,616**

* Data are incomplete due to reporting delay. In addition, deaths that occurred outside of San Francisco are primarily identified through the match with the National Death Index (NDI) which is complete only through 2001.

The trend in death rates in persons with AIDS was examined by their underlying cause of death. The death rate due to HIV/AIDS-related causes plateaued between 1993 and 1995, decreased from 15.7 per 100 persons with AIDS in 1995 to 2.9 per 100 persons with AIDS in 2001 (Figure 4.1). The death rate due to non-HIV/AIDS-related causes has declined slightly in recent years; in 1993, the rate of non-HIV/AIDS-related causes was 2.2 per 100 persons with AIDS and was 1.0 per 100 persons with AIDS in 2001.

Figure 4.1 Death rates* due to HIV/AIDS-related and non-HIV/AIDS-related causes among persons with AIDS, San Francisco, 1993-2001



* Death rates are calculated as the number of persons with AIDS who died each year divided by the number of total AIDS cases for that year. See Technical Notes for "Causes of Death."

The proportion of deaths in which HIV/AIDS was listed as an underlying cause of death decreased from 88% of AIDS deaths occurring between 1993 and 1995 to 73% in 1999-2001 (Table 4.2). Other frequently cited underlying causes of death in 1999-2001 include non-AIDS cancer (6.6%), heart disease (4.5%), drug overdose (2.6%), and liver disease (1.9%). The proportion of persons with AIDS who died of these non-HIV/AIDS-related conditions increased over time. Although infrequent, cardiomyopathy was listed as a cause of death in 0.9% of deaths in 1999-2001 compared to less than 0.3% of deaths in earlier years. This may reflect an increase in deaths from HAART-related cardiomyopathy.

Table 4.2 Underlying causes of death among persons with AIDS, San Francisco, 1993-2001

	Year of Death					
	1993-1995 N = 4,784		1996-1998 N = 1,997		1999-2001 N = 1,129	
Underlying Cause of Death*	No.	(%)	No.	(%)	No.	(%)
HIV/AIDS	4,185	(87.5)	1,521	(76.2)	821	(72.7)
Non-AIDS cancer	67	(1.4)	73	(3.7)	74	(6.6)
Lung cancer	21	(0.4)	17	(0.9)	24	(2.1)
Liver cancer	3	(0.1)	11	(0.6)	17	(1.5)
Anal cancer	0	(0.0)	4	(0.2)	6	(0.5)
Heart disease	53	(1.1)	46	(2.3)	51	(4.5)
Coronary heart disease	18	(0.4)	19	(1.0)	28	(2.5)
Cardiomyopathy	3	(0.1)	5	(0.3)	10	(0.9)
Drug overdose	35	(0.7)	41	(2.1)	29	(2.6)
Liver disease	42	(0.9)	22	(1.1)	22	(1.9)
Alcoholic liver disease	8	(0.2)	12	(0.6)	13	(1.2)
Liver cirrhosis	13	(0.3)	6	(0.3)	7	(0.6)
Suicide	44	(0.9)	24	(1.2)	19	(1.7)
Chronic obstructive lung disease	18	(0.4)	11	(0.6)	13	(1.2)
Viral hepatitis	53	(1.1)	51	(2.6)	12	(1.1)

* See Technical Notes "Causes of Death."

Table 4.3 summarizes both underlying and contributory causes of death among persons with AIDS. Although persons with AIDS predominantly died of HIV/AIDS-related causes, the increasing proportion of deaths due to non-HIV/AIDS-related causes suggests that certain highly prevalent risk behaviors in this population are playing an important role in mortality trends. Co-infection with HIV and hepatitis viruses may be related to deaths associated with liver disease, viral hepatitis, and liver cancer. Smoking may be related to deaths associated with lung cancer, obstructive lung disease, and coronary heart disease. Use of illicit drugs contributes to deaths due to drug overdoses and mental disorders due to substance use.

Table 4.3 Multiple causes of death among persons with AIDS, San Francisco, 1993-2001

	Year of Death					
	1993-1995 N = 4,784		1996-1998 N = 1,997		1999-2001 N = 1,129	
Multiple Causes of Death*	**No.**	**(%)**	**No.**	**(%)**	**No.**	**(%)**
HIV/AIDS	4,579	(95.7)	1,810	(90.6)	968	(85.7)
Heart disease	754	(15.8)	326	(16.3)	223	(19.8)
Coronary heart disease	32	(0.7)	36	(1.8)	50	(4.4)
Cardiomyopathy	50	(1.0)	31	(1.6)	31	(2.7)
Pneumonia	790	(16.5)	288	(14.4)	169	(15.0)
Liver disease	248	(5.2)	158	(7.9)	161	(14.3)
Liver cirrhosis	63	(1.3)	56	(2.8)	59	(5.2)
Alcoholic liver disease	16	(0.3)	17	(0.9)	15	(1.3)
Viral hepatitis	95	(2.0)	94	(4.7)	125	(11.1)
Non-AIDS cancer	273	(5.7)	149	(7.5)	107	(9.5)
Lung cancer	22	(0.5)	21	(1.1)	27	(2.4)
Liver cancer	4	(0.1)	13	(0.7)	21	(1.9)
Anal cancer	1	(0.0)	6	(0.3)	9	(0.8)
Septicemia	300	(6.3)	150	(7.5)	107	(9.5)
Renal disease	169	(3.5)	103	(5.2)	77	(6.8)
Mental disorders due to substance use	45	(0.9)	58	(2.9)	47	(4.2)
Drug overdose	40	(0.8)	50	(2.5)	39	(3.5)
Chronic obstructive lung disease	53	(1.1)	39	(2.0)	36	(3.2)
Cerebrovascular disease	66	(1.4)	32	(1.6)	32	(2.8)
Aspergillosis	73	(1.5)	50	(2.5)	21	(1.9)
Suicide	44	(0.9)	24	(1.2)	19	(1.7)

* Includes underlying and contributory causes of death. Individuals may have more than one cause of death. See Technical Notes "Causes of Death".

5 Persons Living with AIDS

Although the annual number of new AIDS cases has decreased since 1992, ongoing incidence of AIDS coupled with the increase in survival after AIDS has resulted in an increasing number of persons living with AIDS. As of December 31, 2003, there were 9,440 persons living with AIDS in San Francisco (Table 5.1). The demographic and risk characteristics of persons living with AIDS have remained relatively stable between 2000 and 2003; most are male, white, aged 40-49 years, and MSM (including MSM IDU). Of note, more than three quarters of persons living with AIDS are 40 years and older and 33% are over 50.

Table 5.1 Persons living with AIDS by demographic and risk characteristics, San Francisco, 2000-2003#

	2000		2001		2002		2003	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Gender								
Male	8,148	(92)	8,329	(92)	8,576	(92)	8,709	(92)
Female	524	(6)	542	(6)	557	(6)	569	(6)
Transgender	155	(2)	155	(2)	158	(2)	162	(2)
Race/Ethnicity								
White	6,011	(68)	6,114	(68)	6,280	(68)	6,336	(67)
African American	1,260	(14)	1,296	(14)	1,333	(14)	1,356	(14)
Latino	1,164	(13)	1,194	(13)	1,234	(13)	1,286	(14)
Asian/Pacific Islander	335	(4)	361	(4)	381	(4)	394	(4)
Native American	50	(1)	53	(1)	55	(1)	57	(1)
Other/Unknown	7	(<1)	8	(<1)	8	(<1)	11	(<1)
Age (at end of each year)								
0 - 19	32	(<1)	31	(<1)	30	(<1)	29	(<1)
20 - 29	228	(3)	203	(2)	180	(2)	140	(1)
30 - 39	2,625	(30)	2,367	(26)	2,150	(23)	1,907	(20)
40 - 49	3,777	(43)	3,994	(44)	4,142	(45)	4,219	(45)
50+	2,165	(25)	2,431	(27)	2,789	(30)	3,145	(33)
Risk								
MSM	6,442	(73)	6,589	(73)	6,797	(73)	6,935	(73)
IDU	837	(9)	851	(9)	864	(9)	884	(9)
MSM IDU	1,169	(13)	1,179	(13)	1,198	(13)	1,174	(12)
Heterosexual	208	(2)	219	(2)	233	(3)	239	(3)
Transfusion/Hemophilia	52	(1)	51	(1)	53	(1)	53	(1)
Other/Unknown	119	(1)	137	(2)	146	(2)	155	(2)
Total	**8,827**		**9,026**		**9,291**		**9,440**	

Persons living with AIDS at the end of each year.

6 Use of HAART among Persons Living with AIDS

Use of highly active antiretroviral therapies (HAART) was assessed among persons living with AIDS (i.e., not known to have died) including those who moved outside of San Francisco or were lost to follow up (see Technical Notes, Treatments). The proportion of persons living with AIDS who received HAART increased substantially from 5% in 1995 to 74% in 2000 (Figure 6.1). From 2000 to 2003, the proportion receiving HAART has been relatively stable. By the end of 2003, 76% of persons living with AIDS were noted to have received HAART.

As of December 2003, a greater percent of men have used HAART than women or transgender persons (Figure 6.2). Use of HAART was higher among Asians/Pacific Islanders (80%) and whites (76%) compared to African Americans (74%), Latinos, and Native Americans (73%). HAART use was more common among MSM and heterosexuals with AIDS than among heterosexual and homosexual injection drug users.

Figure 6.1 Use of HAART among persons living with AIDS, San Francisco, 1995-2003

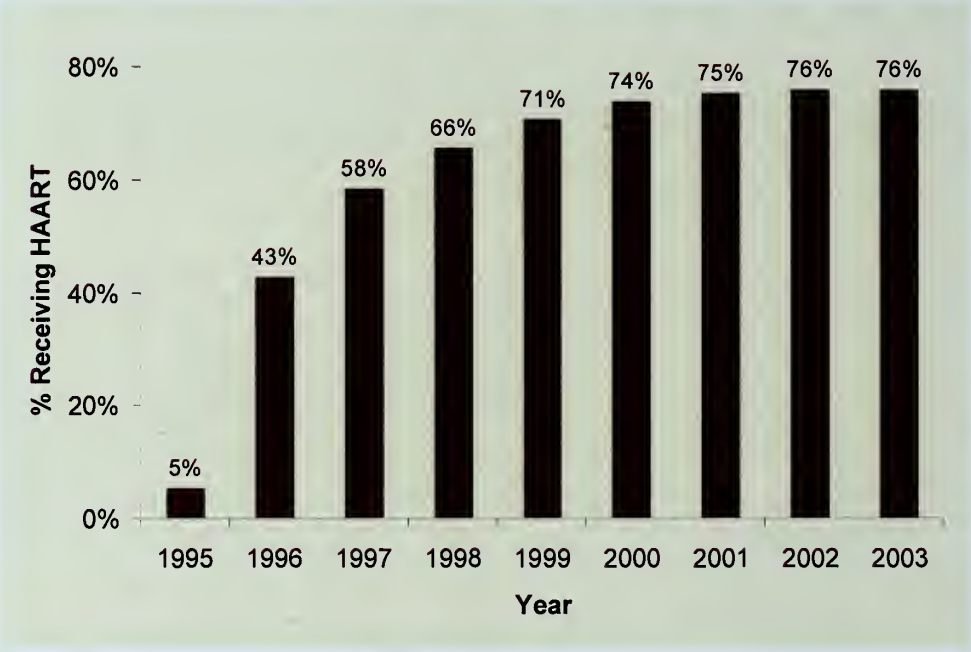
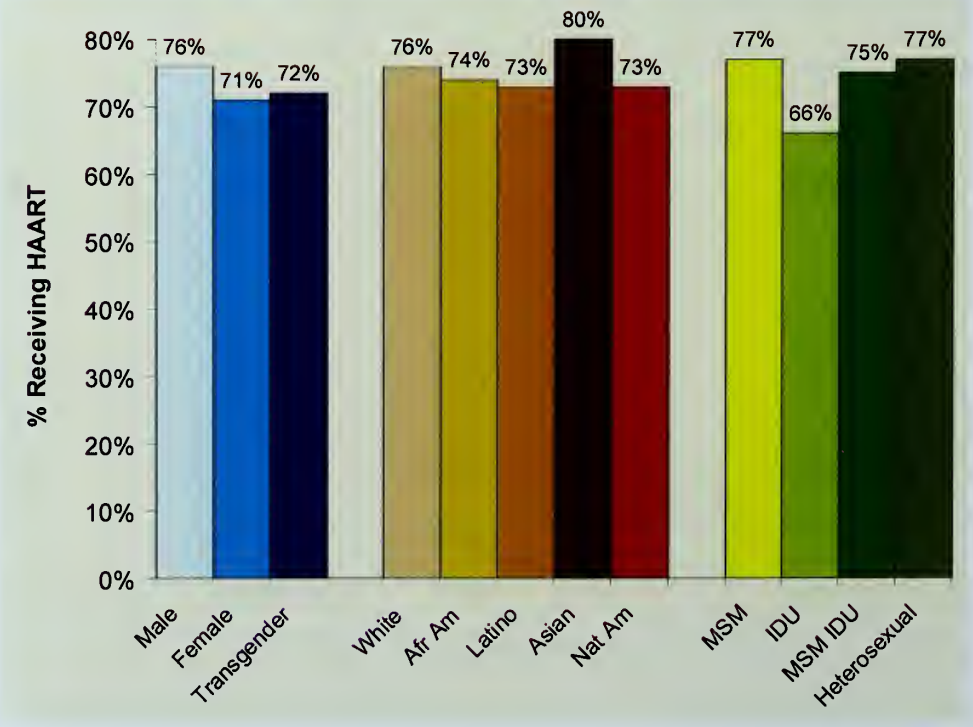


Figure 6.2 Use of HAART among persons living with AIDS by gender, race/ethnicity, and risk, San Francisco, December 2003



7 Insurance Status at Time of AIDS Diagnosis

Insurance status at the time of AIDS diagnosis differs by gender. Between 1998 and 2003, the proportion of men with private insurance increased while the proportion of women and transgender persons with private insurance at the time of AIDS diagnosis decreased (Figure 7.1). The proportion of uninsured women increased between 1998 and 2002 and decreased between 2002 and 2003. Over fifty-five percent of transgender AIDS cases diagnosed in 2003 were uninsured. Among AIDS cases diagnosed between 1998 and 2003, 37% of men, 26% of women, and 56% of transgender persons lack health insurance at the time of AIDS diagnosis (Figure 7.2).

Figure 7.1 Trends in insurance status among persons with AIDS by gender, San Francisco, 1998-2003

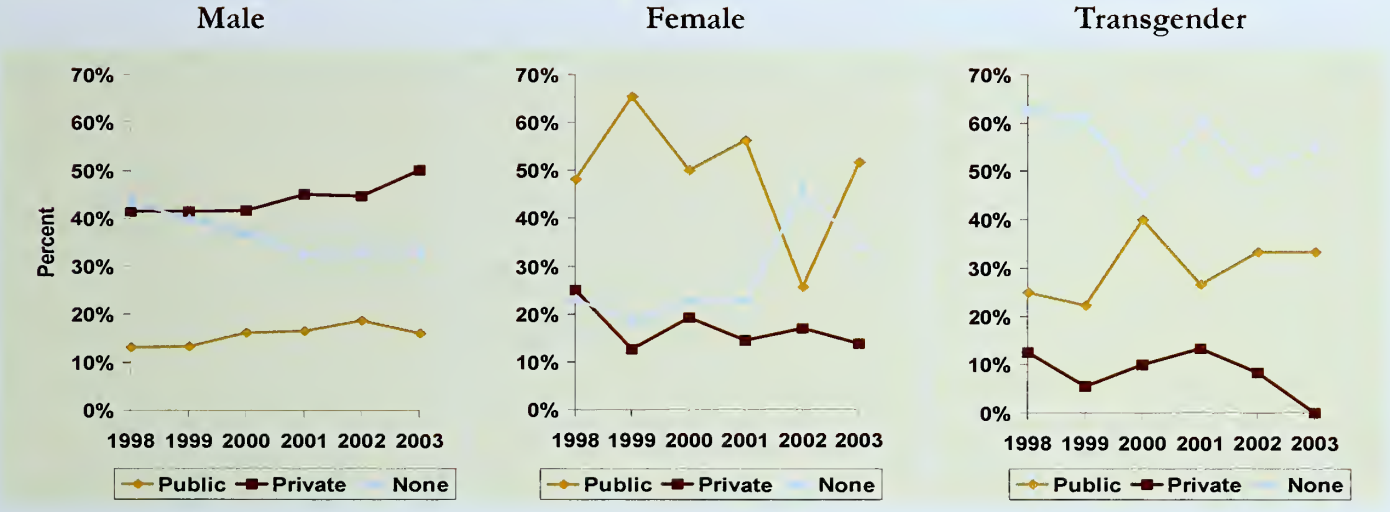
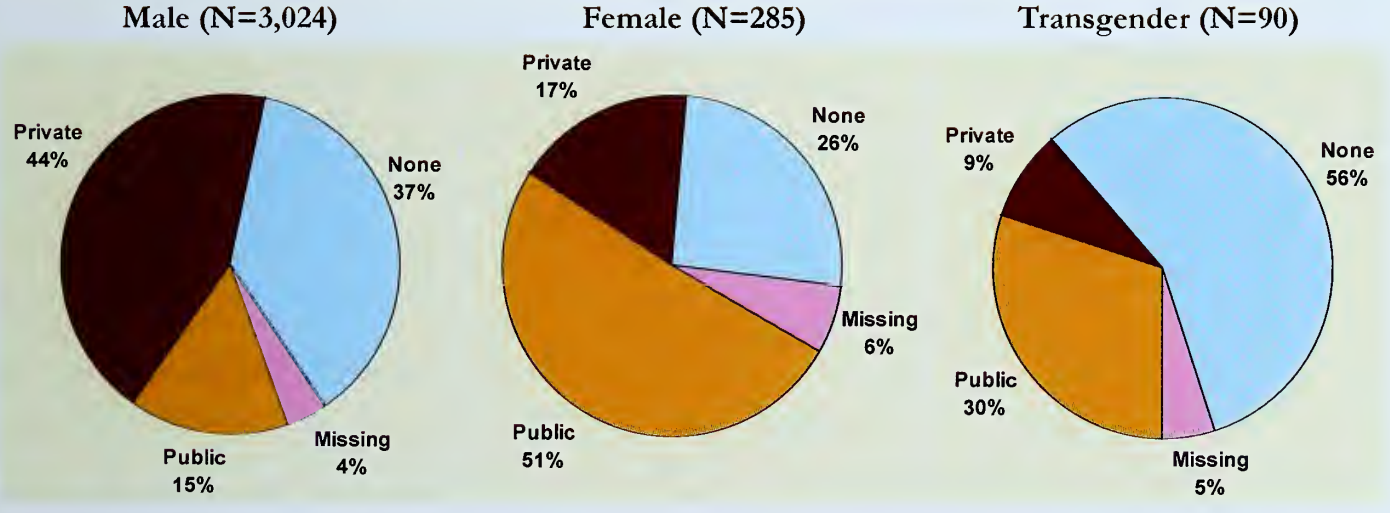


Figure 7.2 AIDS cases by gender and insurance status at diagnosis, San Francisco, 1998-2003

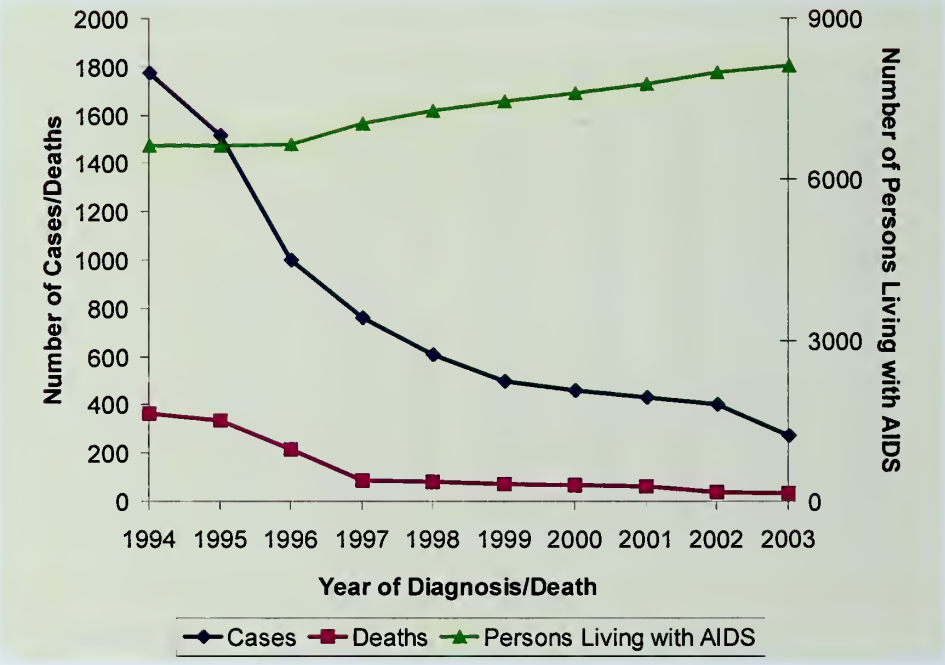


8 HIV/AIDS among Men Who Have Sex with Men

AIDS surveillance data

While the number of new AIDS cases and AIDS deaths among MSM has continued to decline, the number of MSM living with AIDS continues to increase (Figure 8.1). This is due in part to improved treatment for persons with AIDS. In 2003, there were 8,109 MSM living with AIDS in San Francisco.

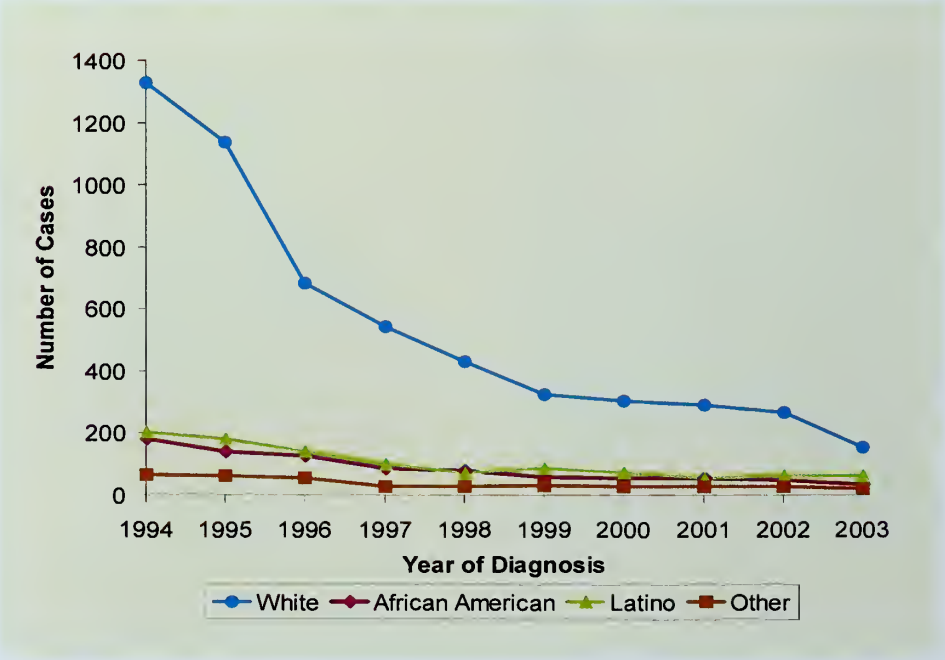
Figure 8.1 AIDS cases, deaths, and prevalence among MSM*, San Francisco, 1994-2003



* Includes MSM and MSM IDU.

The majority of San Francisco AIDS cases have occurred among white MSM (Figure 8.2). Although the number of AIDS cases has declined among all MSM, whites still accounted for the greatest number of MSM AIDS cases followed by Latino MSM.

Figure 8.2 AIDS cases among MSM* by race/ethnicity, San Francisco, 1994-2003

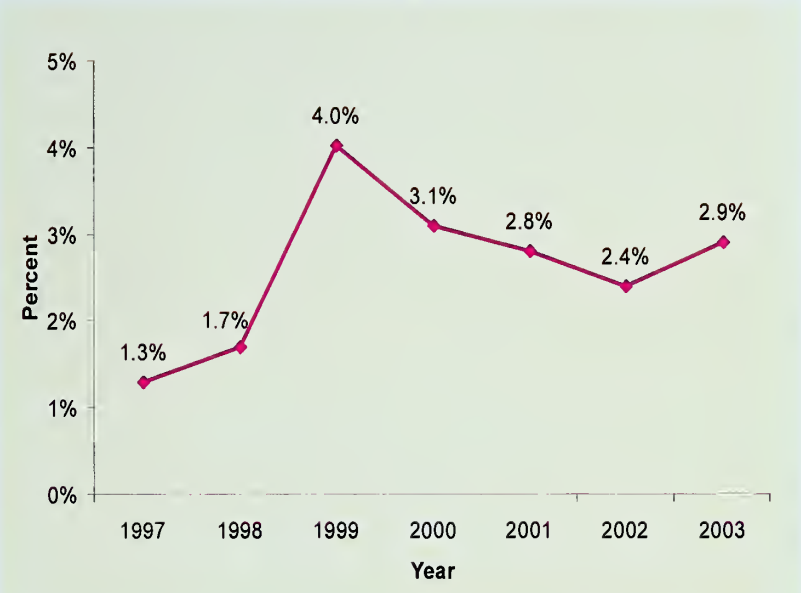


* Includes MSM and MSM IDU.

HIV incidence data

Figure 8.3 shows the trend in HIV incidence among MSM seeking anonymous HIV testing in San Francisco using STARHS (see Technical Notes). HIV incidence rose from a low in 1997 to a peak in 1999. Since 1999, HIV incidence appears to have leveled off at a rate between 2.4% and 3.1% per year.

Figure 8.3 HIV incidence among MSM seeking anonymous HIV testing, San Francisco, 1997-2003

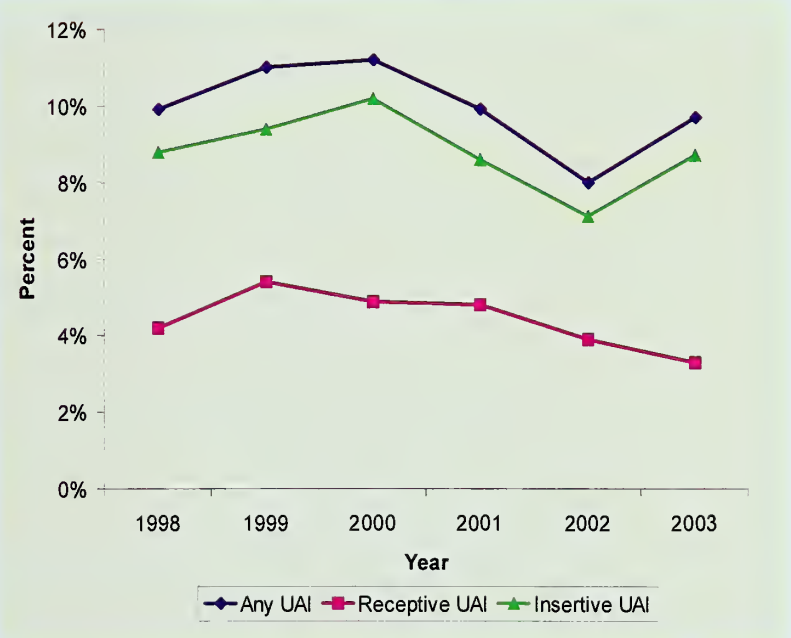


Sexual risk behavior data

Anonymous Testing Sites

Figure 8.4 shows the percent of MSM seeking anonymous HIV testing who report having unprotected anal intercourse (UAI) with a partner known to be HIV-positive. The vast majority of MSM seeking HIV testing are HIV-negative. While overall and insertive ("top") UAI with a known HIV-positive partner show no consistent temporal trend, receptive ("bottom") UAI has steadily decreased since 1999. The trends suggest that HIV-negative MSM are selectively using condoms or the insertive position when their partner is known to be HIV-positive.

Figure 8.4 Percent of MSM reporting UAI with a partner known to be HIV-positive, anonymous testing sites, San Francisco, 1998 - 2003



Stop AIDS Project

The Stop AIDS Project collects information on sexual behavior and HIV serostatus through the course of their outreach HIV prevention activities for MSM in San Francisco. Their data provide an opportunity to track annual trends in HIV-related risk behavior in a large, community-recruited sample of MSM.

Figure 8.5 illustrates trends in unprotected anal intercourse (UAI) from 1998 through 2003 by self-reported HIV serostatus. An overall trend of increasing UAI is apparent for the whole time period. The encouraging decrease that occurred in 2002 reversed direction in 2003, with increases in UAI among HIV-positive MSM, HIV-negative MSM, and MSM who did not know or declined to report their HIV status. Figure 8.5 also illustrates that UAI is most commonly reported by HIV-positive MSM.

Figure 8.6 shows the proportion of MSM who report having UAI with one or more sex partners whose serostatus was not known to them. This measure most closely gauges the potential for HIV transmission to occur by excluding sex between individuals known to be of the same HIV serostatus. UAI among potentially HIV-serodiscordant men increased from 1998 to 2001 and then decreased from 2001 to 2003. Even though UAI increased overall (Figure 8.5), MSM are reporting fewer partnerships where HIV transmission might occur since 2001.

Figure 8.5 Percent of MSM reporting UAI by self-reported HIV status in the last six months, the Stop AIDS Project, San Francisco, 1998-2003

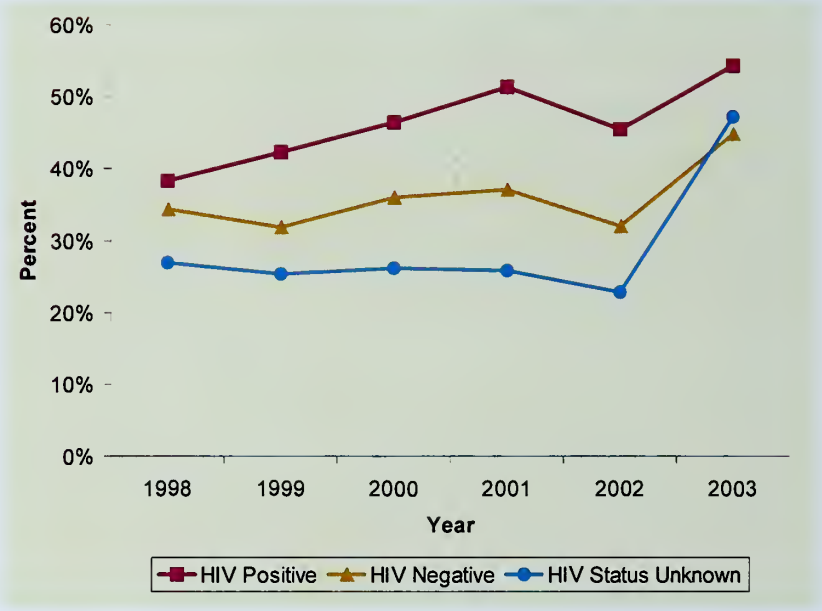
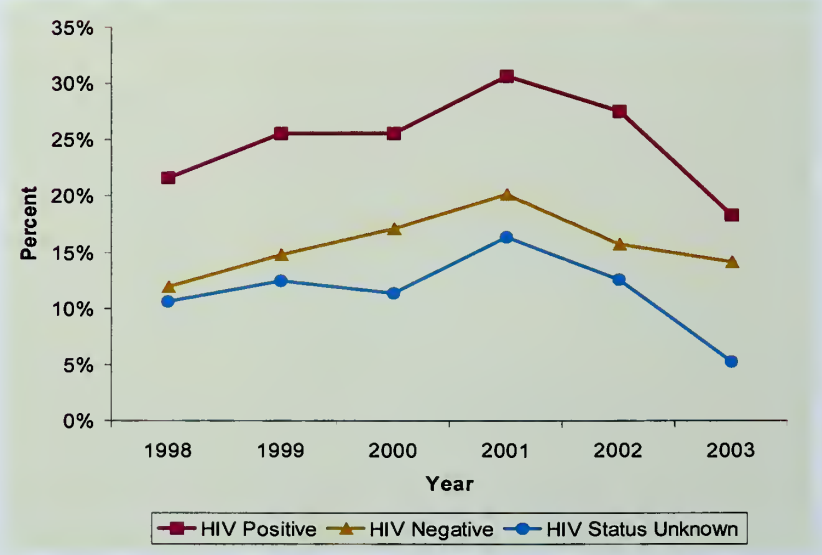


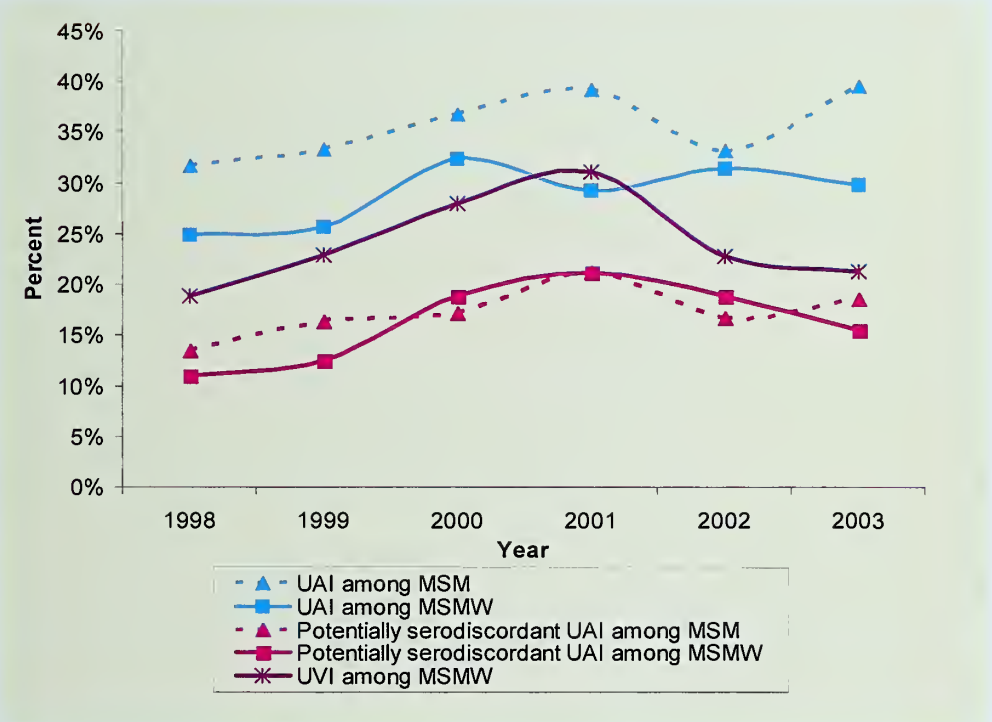
Figure 8.6 Percent of MSM reporting UAI with at least one partner of unknown HIV status* in the last six months, the Stop AIDS Project, San Francisco, 1998-2003



* For MSM who did not know or report their HIV serostatus, any UAI was considered potentially serodiscordant

Figure 8.7 illustrates trends in unprotected anal intercourse (UAI), potentially serodiscordant UAI, and unprotected vaginal intercourse from July 1998 through June 2003 for MSM and MSM who also have sex with women (that is, bisexuals or MSMW). UAI increased from July 1998 to June 2003 for both MSM and MSMW. UAI among MSMW tracked but lagged behind MSM. Trends in potentially serodiscordant UAI were parallel in direction and magnitude for both MSM and MSMW, both peaking in 2001 and decreasing thereafter. Following a similar trend, but at a higher magnitude, unprotected vaginal intercourse also peaked in 2001 with a decrease thereafter.

Figure 8.7 Trends in UAI, potentially serodiscordant UAI and UVI among MSMW and MSM, the Stop AIDS Project, San Francisco, July 1998 - June 2003



* Potentially serodiscordant UAI = unprotected anal intercourse with one or more partners of unknown HIV serostatus, UVI = unprotected vaginal intercourse, MSMW = men who have sex with men and women.

Sexually transmitted disease data

Figure 8.8 shows trends in male rectal gonorrhea and male gonococcal proctitis in San Francisco from 1997 through 2003. Data on male rectal gonorrhea originate from case reporting from laboratories and health providers throughout the city. Data on male gonococcal proctitis originate from the municipal STD clinic only. Infection with gonorrhea is a biological marker for high risk sexual behavior as well as a factor that enhances the acquisition and spread of HIV. Among men, rectal gonorrhea is a marker for unprotected receptive anal sex.

The last several years have witnessed a steady increase in reported cases of male rectal gonorrhea, consistent with rises in unprotected anal sex among MSM. Male gonococcal proctitis are cases with symptomatic infection. Data on male gonococcal proctitis suggest that some of the increase in reported male rectal gonorrhea may be due to increased screening.

Data may underestimate true levels of infections due to several factors, including lack of rectal screening by many health providers, under reporting, delayed reporting, and the large proportion of cases that do not manifest symptoms.

Figure 8.8 Male rectal gonorrhea and male gonococcal proctitis among MSM, San Francisco, 1997-2003

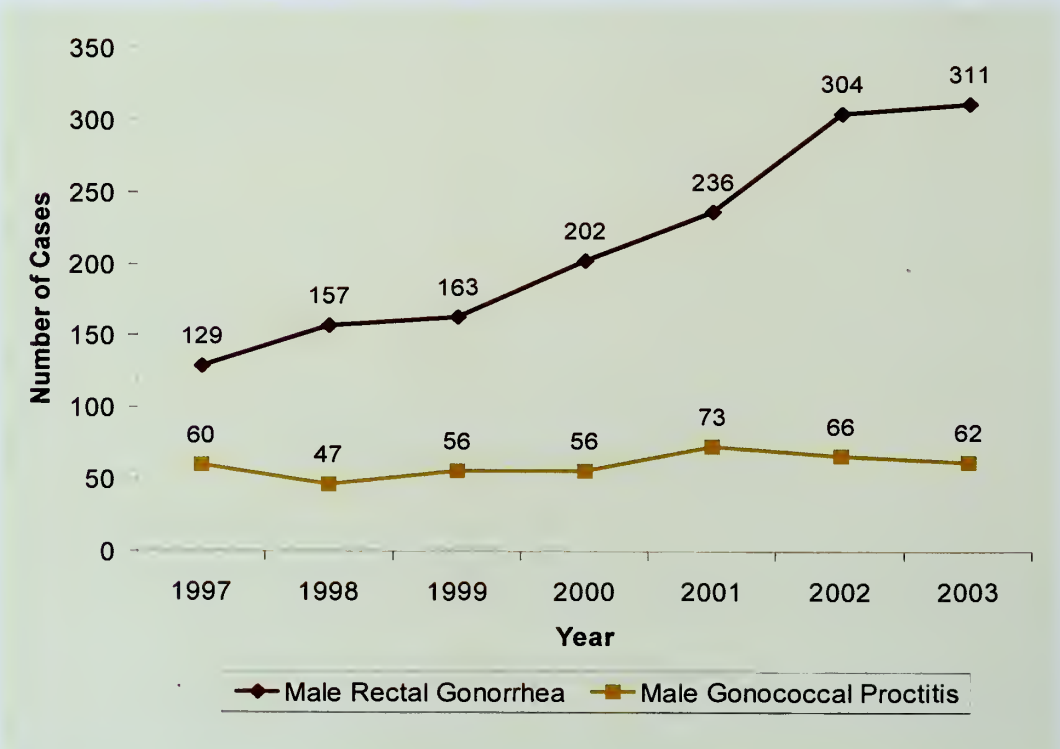
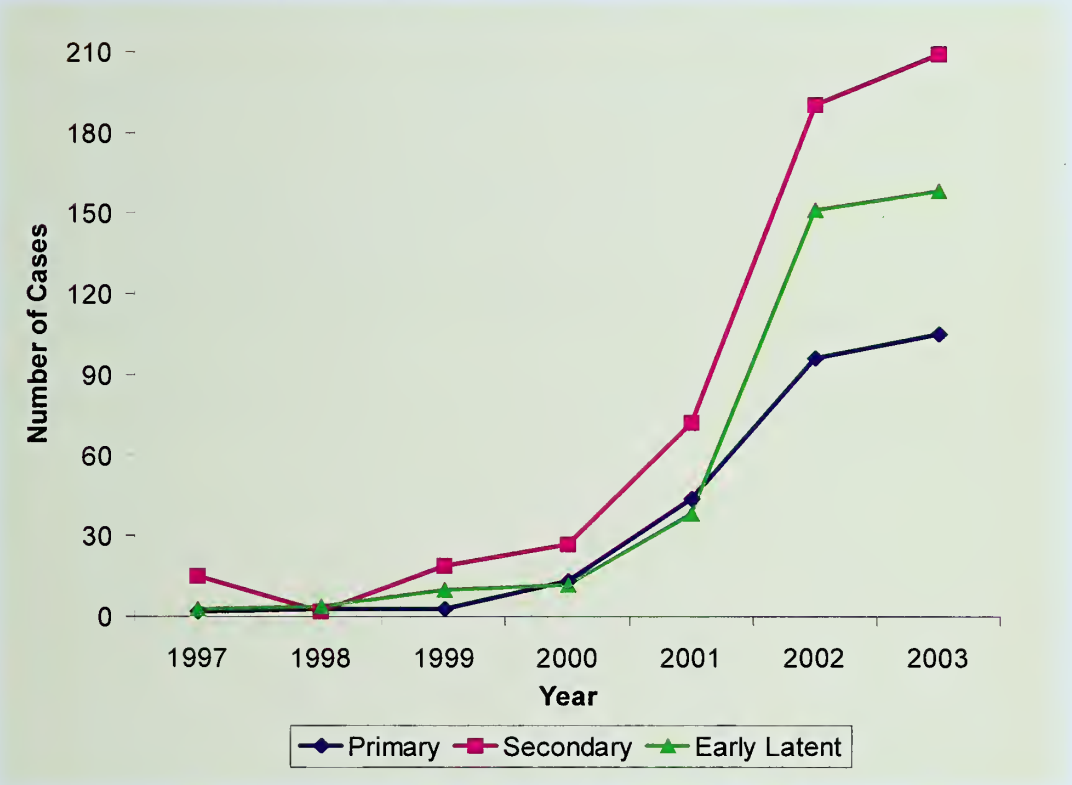


Figure 8.9 shows trends in primary, secondary, and early latent cases of syphilis among MSM in San Francisco from 1997 through 2003. Data originate from case reporting from laboratories and health providers throughout the city although the majority are patients seen at the municipal STD clinic. Like gonorrhea, syphilis is a biological marker for high risk sexual behavior as well as a factor that enhances the acquisition and spread of HIV. The increase in early syphilis among MSM in San Francisco since 1998 is dramatic.

Figure 8.9 Syphilis among MSM, San Francisco, 1997-2003



9 HIV/AIDS among Injection Drug Users

AIDS surveillance data

Injection drug use by non-MSM comprises the third most frequent exposure group among cumulative AIDS cases in San Francisco, after MSM and MSM IDU. This is in contrast to the nation as a whole in which non-MSM IDU comprise the second most frequent exposure group. The number of new AIDS cases among non-MSM IDU has declined (Figure 9.1). The number of deaths in this group declined substantially in 1997 and more modestly thereafter. The number of non-MSM IDU living with AIDS has increased and as of December 31, 2003 there were 884 non-MSM IDU living with AIDS in San Francisco.

For several years, the greatest number of AIDS cases among non-MSM IDU occurred among African Americans, yet in 2003 whites accounted for the greatest number of cases in this risk group (Figure 9.2).

Figure 9.1 AIDS cases, deaths, and prevalence among non-MSM IDU, San Francisco, 1994-2003

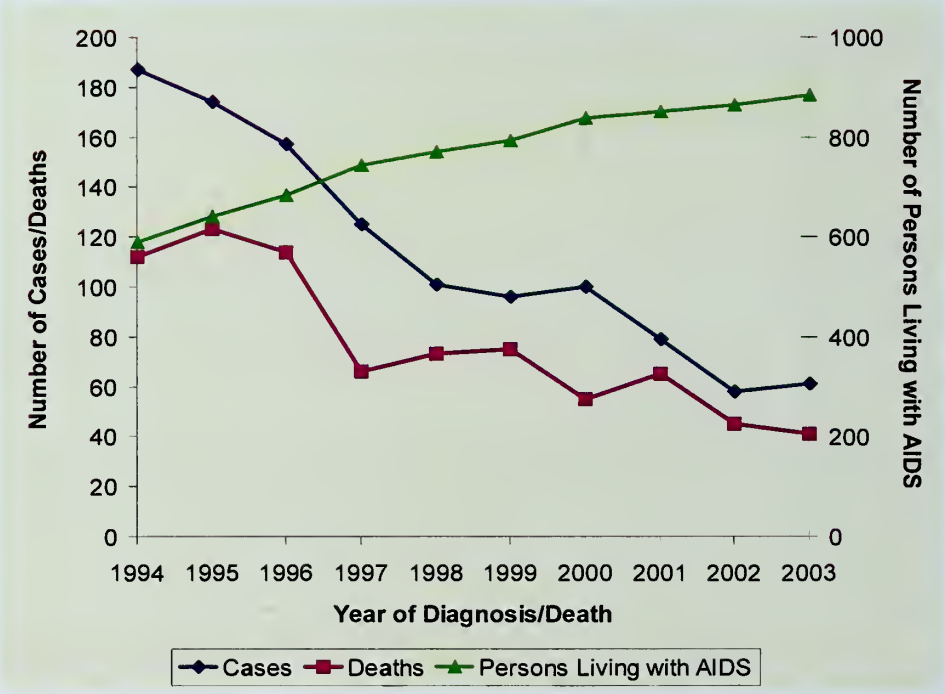


Figure 9.2 AIDS cases among non-MSM IDU by race/ethnicity, San Francisco, 1994-2003

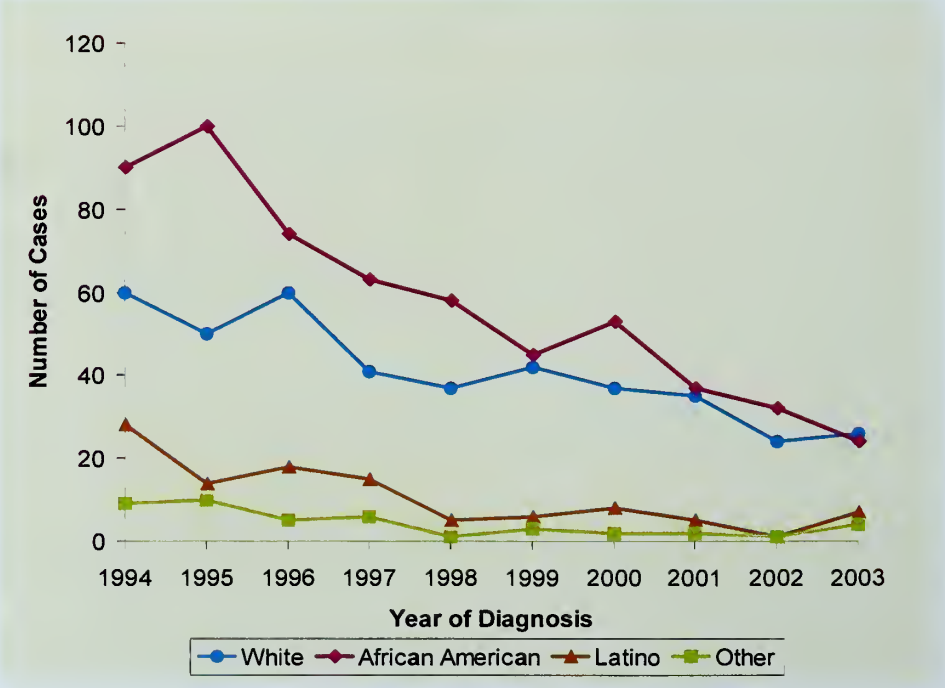


Table 9.1 shows the risk and race/ethnicity distribution of AIDS cases directly or indirectly associated with injection drug use. MSM IDU account for the majority (63%) of IDU-associated AIDS cases followed by male heterosexual IDU (23%). Of the MSM IDU cases, 72% are white and 16% African American. This differs markedly from the heterosexual male and female IDU AIDS cases in which 49% and 52% respectively, are African American.

Table 9.1 Injection drug use-associated AIDS cases by exposure category and race/ethnicity, diagnosed through December 2003, San Francisco

		Race/Ethnicity Distribution by Percent			
Exposure Category	Total Number	White	African American	Latino	Other
Male heterosexual IDU	1,423	36%	49%	12%	2%
Female heterosexual IDU	625	33%	52%	9%	5%
MSM IDU	3,827	72%	16%	10%	3%
Lesbian IDU	45	49%	31%	13%	7%
Heterosexual contact with IDU	168	35%	45%	14%	7%
Children whose mothers are IDUs or sex partners of IDUs	31	19%	52%	16%	13%

10 HIV/AIDS among Heterosexuals

AIDS surveillance data

The number of AIDS cases among persons who acquired HIV infection through heterosexual contact is small relative to other risk groups. The number of new AIDS cases in this group has declined (Figure 10.1). The number of deaths among heterosexual non-IDU has also declined and only six deaths in this group occurred in 2003. Although reporting of death is not yet complete, it is likely that the number of deaths among heterosexual AIDS cases will remain small. The number of heterosexual non-IDU living with AIDS has increased steadily to a total of 239 by December 31, 2003.

Trends in heterosexual AIDS cases by race/ethnicity fluctuate year to year due to small numbers (Figure 10.2). Overall, African Americans account for the largest number of heterosexual AIDS cases since 1994.

Figure 10.1 AIDS cases, deaths, and prevalence among heterosexuals, San Francisco, 1994-2003

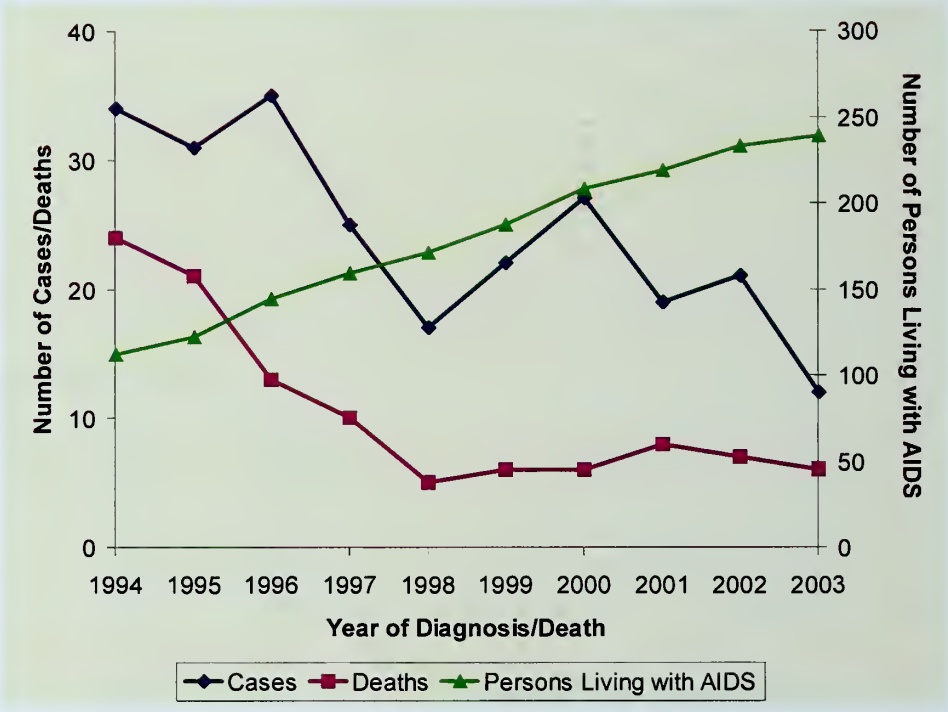
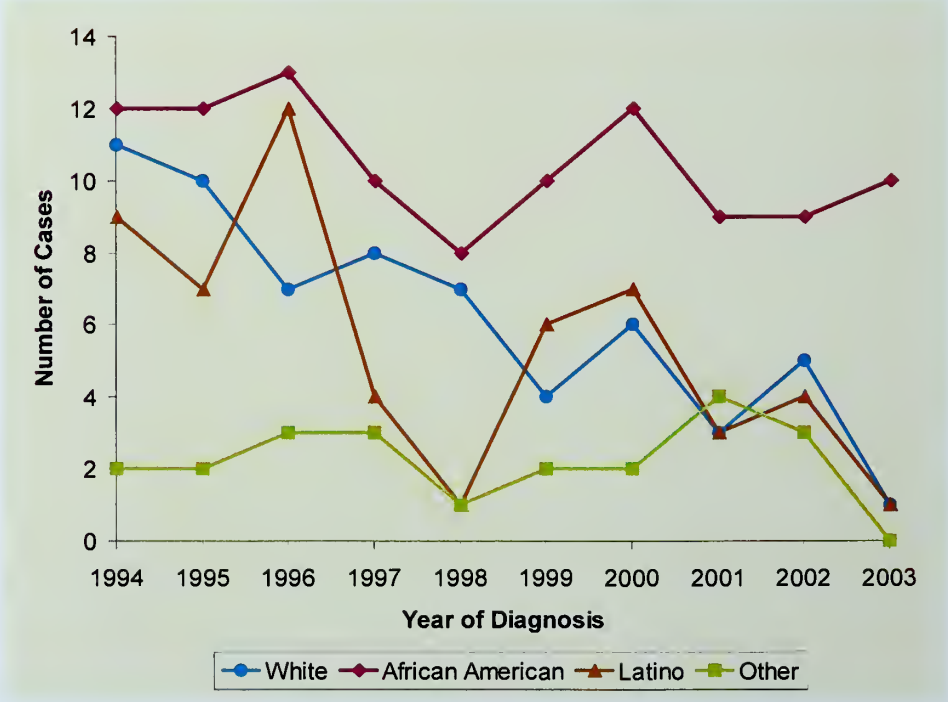


Figure 10.2 AIDS cases among heterosexuals by race/ethnicity, San Francisco, 1994-2003



The majority of heterosexually acquired AIDS cases are women (Table 10.1). Of the 326 women in this group, 133 (41%) reported sex with an IDU. Among the 102 men in this risk group, 35 (34%) reported an IDU partner. Sixty percent of men and 40% of women reported sex with an HIV infected partner of unknown risk.

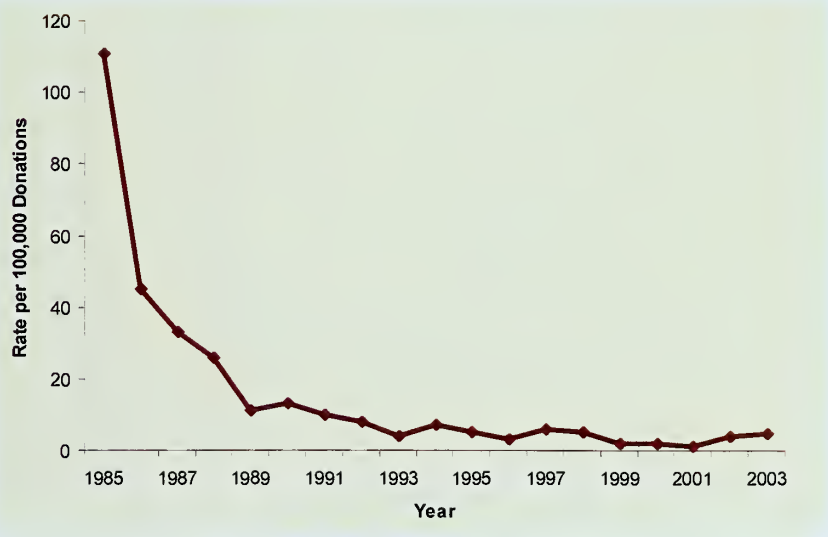
Table 10.1 AIDS cases among heterosexuals by exposure category and gender, diagnosed through December 2003, San Francisco

	Men		Women	
Exposure Category	**Number**	**%**	**Number**	**%**
Sex with injection drug user	35	34%	133	41%
Sex with bisexual men	N/A	N/A	56	17%
Sex with HIV+ transfusion recipient/persons with hemophilia	6	6%	8	2%
Sex with HIV+ persons of unknown risk	61	60%	129	40%
Total	**102**	**100%**	**326**	**100%**

Blood donation data

Figure 10.3 shows the rate of detection of HIV-positive units of blood per 100,000 donations made by residents of the San Francisco Bay Area. The prevalence of HIV-positive donations dramatically dropped after the advent of HIV antibody testing in 1985. The last decade has seen a low and stable rate of HIV positivity among donations. Data reflect the selection of blood donors at low risk for HIV infection, not necessarily HIV prevalence in the general population. These data, together with the current low rate of new AIDS cases resulting from transfusion of blood and blood products, point to successes in keeping the blood supply free of contamination with HIV. The use of nucleic acid testing has further reduced the chance that a donation made during the "window period" of HIV-antibody testing would escape detection. Nonetheless, there remains an extremely low theoretical chance of HIV transmission through blood transfusion due to the limits of test sensitivity and human error.

Figure 10.3 HIV prevalence rate among blood donations, San Francisco Bay Area, 1985- 2003



Sexually transmitted disease data

Figure 10.4 shows the annual number of primary, secondary, and early latent cases of syphilis among heterosexual men in San Francisco from 1997 through 2003. Data originate from case reporting from laboratories and health providers throughout the city, although the majority are patients seen at the municipal STD clinic. Unlike MSM, syphilis among heterosexual men remains relatively low with no upward trend.

Figure 10.4 Syphilis among heterosexual men, San Francisco, 1997-2003

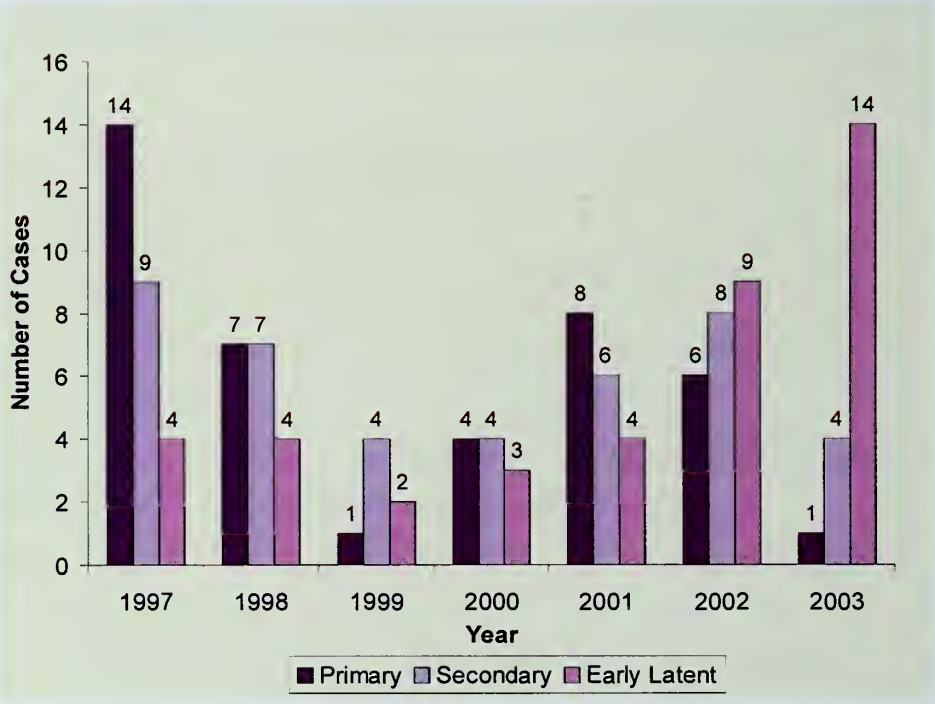
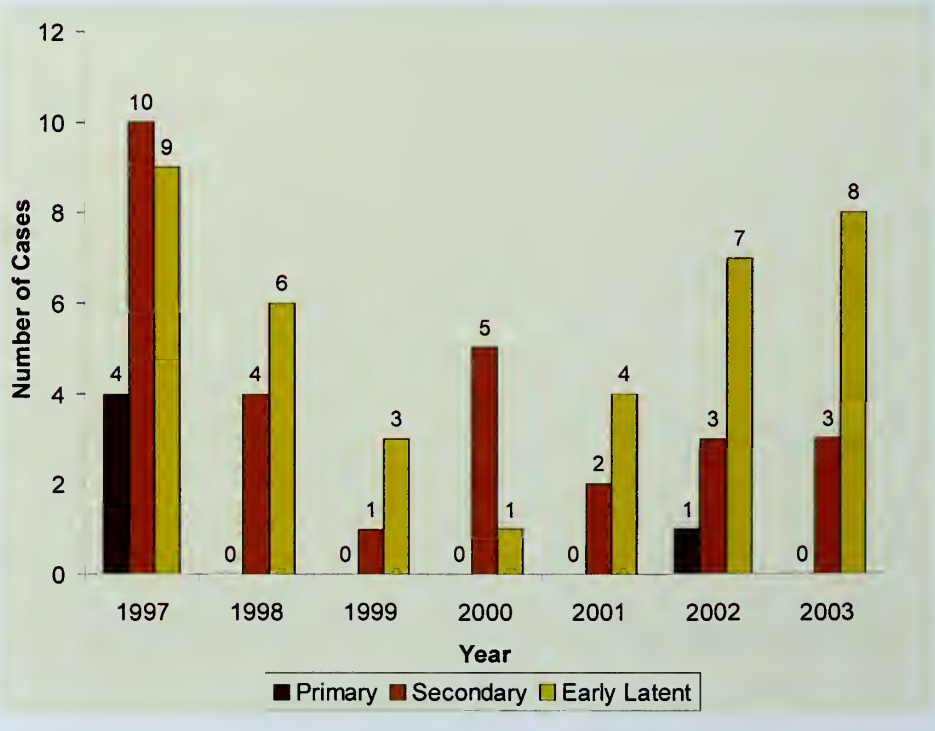


Figure 10.5 shows the annual number of primary, secondary, and early latent cases of syphilis among women in San Francisco from 1997 through 2003. Data originate from case reporting from laboratories and health providers throughout the city, although the majority are patients seen at the municipal STD clinic. Among women, syphilis cases are low with no temporal trend.

Figure 10.5 Syphilis among women, San Francisco, 1997- 2003

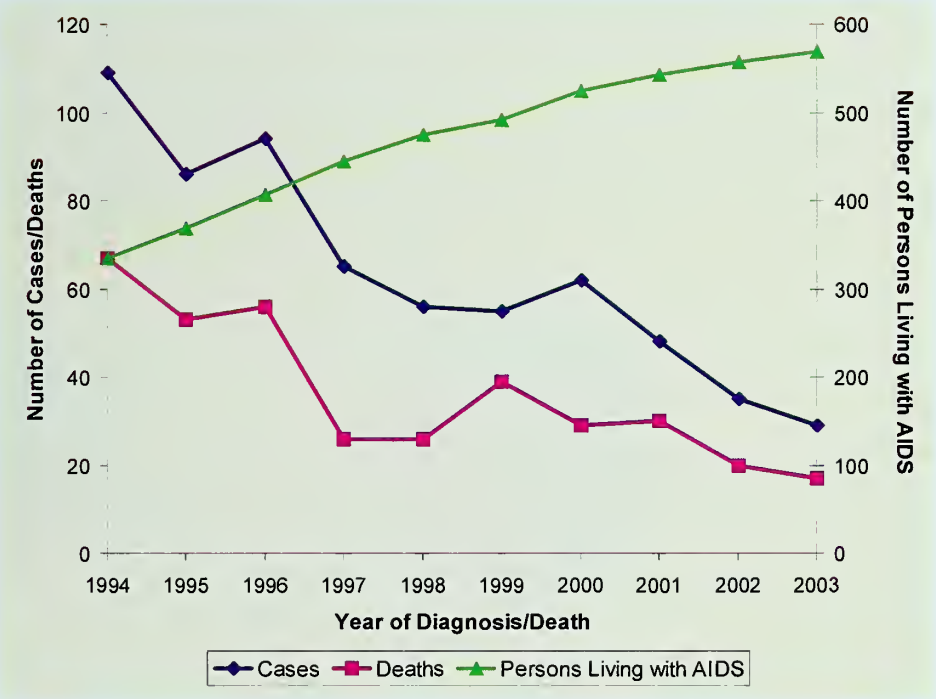


11 HIV/AIDS among Women

AIDS surveillance data

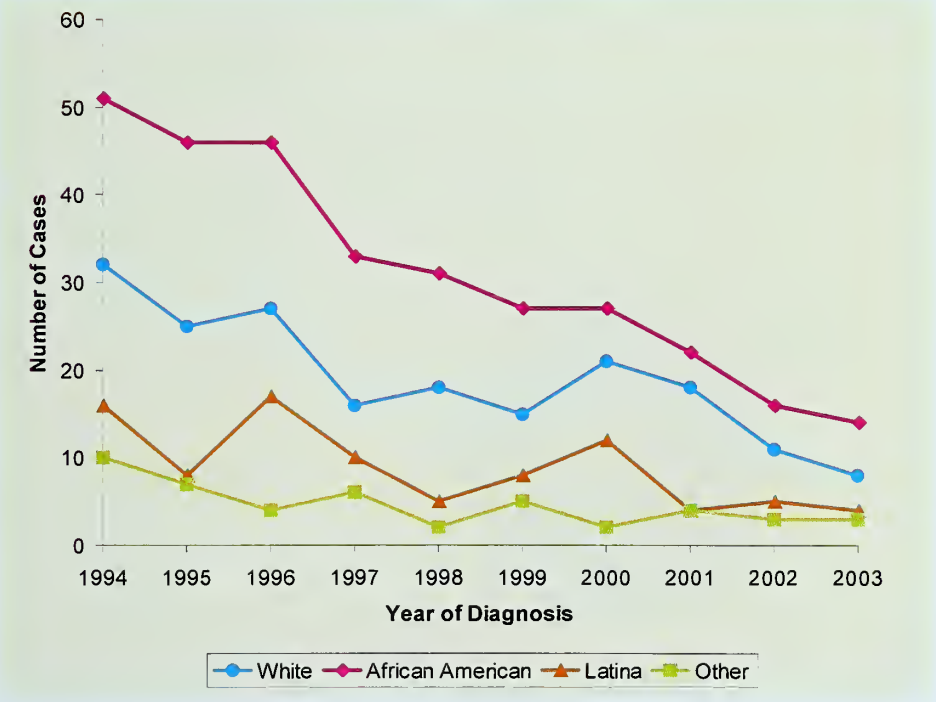
The number of AIDS cases and deaths among women in San Francisco peaked in 1994 with 109 cases and 67 deaths occurring that year (Figure 11.1). As of December 31, 2003 there were 569 women living with AIDS.

Figure 11.1 AIDS cases, deaths, and prevalence among women, San Francisco, 1994-2003



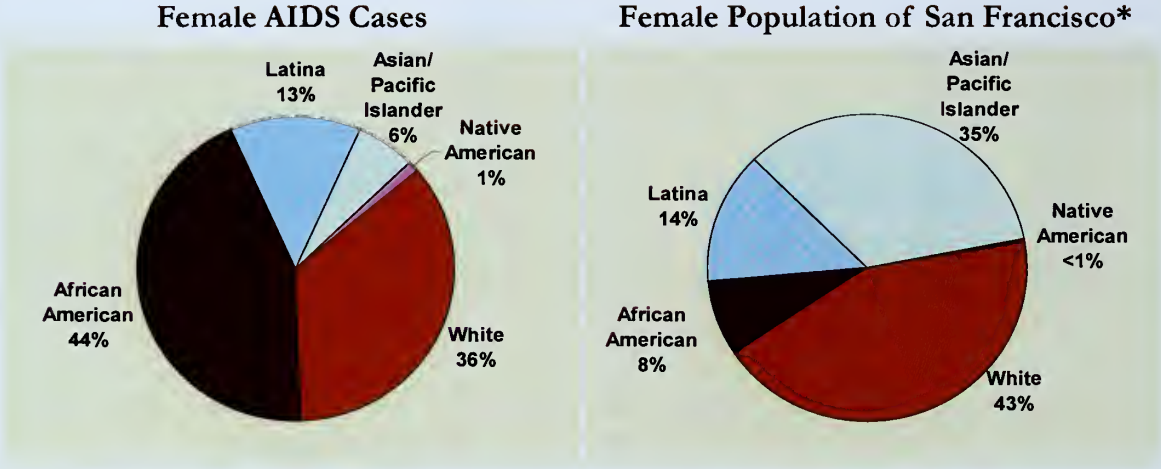
The number of new AIDS cases among African American women has been higher than women of other race/ethnic groups between 1994 and 2003 (Figure 11.2).

Figure 11.2 Female AIDS cases by race/ethnicity, San Francisco, 1994-2003



African American women comprise a disproportionate proportion of the women with AIDS in San Francisco. Among female AIDS cases, 44% occurred among African Americans, even though African American women comprise only 8% of the San Francisco female population (Figure 11.3).

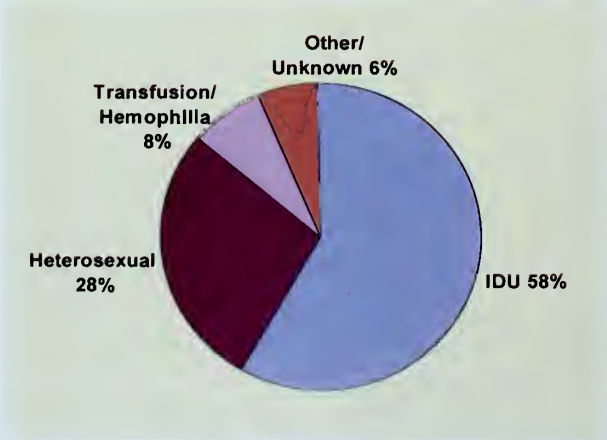
Figure 11.3 Female AIDS cases diagnosed through December 2003 and female population by race/ethnicity, San Francisco



* United States 2000 Census data.

Injection drug use (58%) is the most prominent risk exposure for women with AIDS, followed by heterosexual contact (28%) (Figure 11.4).

Figure 11.4 Female AIDS cases diagnosed through December 2003 by risk, San Francisco



Women's Options Clinic Study

We conducted an unlinked anonymous HIV prevalence survey of women electing pregnancy termination in San Francisco from August 2002 to July 2003 using leftover sera collected for syphilis screening or blood typing (N=1,038). Overall HIV prevalence in this population was 0.58% for San Francisco residents. Table 11.1 shows prevalence by race/ethnicity. HIV incidence by STARHS was 0.11% per year (95% CI <0.001 - 0.81).

Table 11.1 HIV prevalence among women seeking elective pregnancy termination, San Francisco, August 2002-July 2003

Population	HIV Prevalence
All San Francisco women	0.58%
Whites	0.85%
African Americans	0.88%
Latinas	0.25%
Asian/Pacific Islanders	0.57%

12 HIV/AIDS among Adolescents and Young Adults

AIDS surveillance data

As of December 31, 2003, 47 adolescents (aged 13-19 years) and 559 young adults (aged 20-24 years) were diagnosed with AIDS in San Francisco (Table 12.1). The characteristics of young adults with AIDS are similar to other adults; the majority are MSM, white, and male. MSM also account for the greatest proportion of AIDS cases among the 13-19 year olds. However, in contrast to young adults in which MSM IDU is the second most frequent risk group, transfusion/hemophilia-related cases account for 23% of adolescent AIDS cases.

Table 12.1 Adolescent and young adult AIDS cases by risk, gender, and race/ethnicity, diagnosed through December 2003, San Francisco

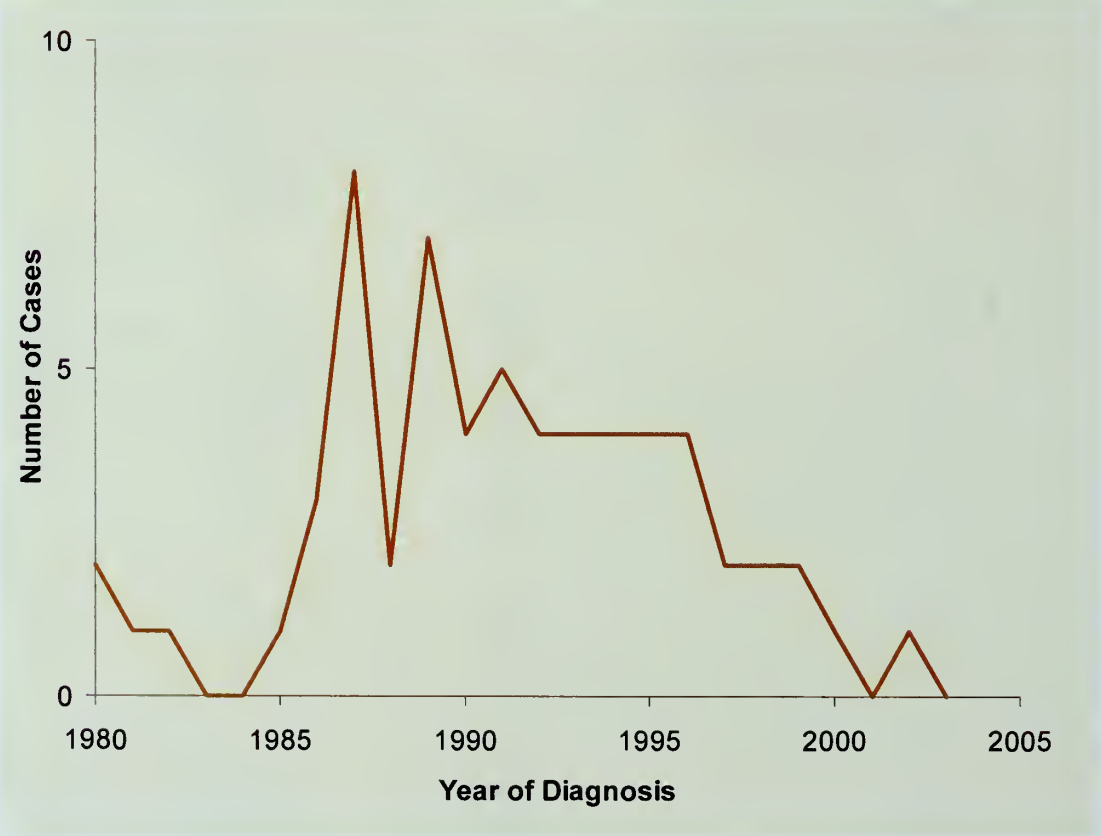
	13-19 Years Old (N=47)	20-24 Years Old (N=559)
Risk		
MSM	30%	59%
IDU	2%	9%
MSM IDU	17%	25%
Transfusion/Hemophilia	23%	2%
Heterosexual	9%	4%
Perinatal	11%	0%
Other/Unknown	9%	1%
Gender		
Male	83%	93%
Female	17%	7%
Race/Ethnicity		
White	34%	62%
African American	6%	14%
Latino	49%	18%
Asian/Pacific Islander	9%	5%
Native American	2%	1%

13 HIV/AIDS among Children

AIDS surveillance data

As of December 31, 2003, a cumulative total of 62 pediatric AIDS cases (less than 13 years old) were diagnosed in San Francisco. The first pediatric case was diagnosed in San Francisco in 1980 (Figure 13.1). The number of pediatric AIDS cases peaked between 1987 and 1989 and reached a plateau between 1990 and 1996. The number of children with AIDS diagnosed each year continued to decline after 1996. Between 2000 and 2003 there were two pediatric AIDS cases.

Figure 13.1 Pediatric AIDS cases by year of diagnosis, San Francisco, 1980-2003



Perinatal HIV data

Data on children with HIV in San Francisco are gathered through the Pediatric Spectrum of Disease (PSD) project. The PSD project was established in 1989 by the Centers for Disease Control and Prevention and collects data from eight areas throughout the United States. In Northern California, hospital surveillance for children less than 13 years old infected with HIV or for infants born to infected mothers has occurred at eight pediatric hospitals (including University of California at San Francisco and San Francisco General Hospital). Records from HIV positive pediatric patients cared for through the California Children's Services program, a state agency providing funding and case management for HIV-positive children, are also included in the PSD project. Data presented here include infants born to mothers documented to have HIV before delivery and without a history of blood or blood product transfusion before 1985.

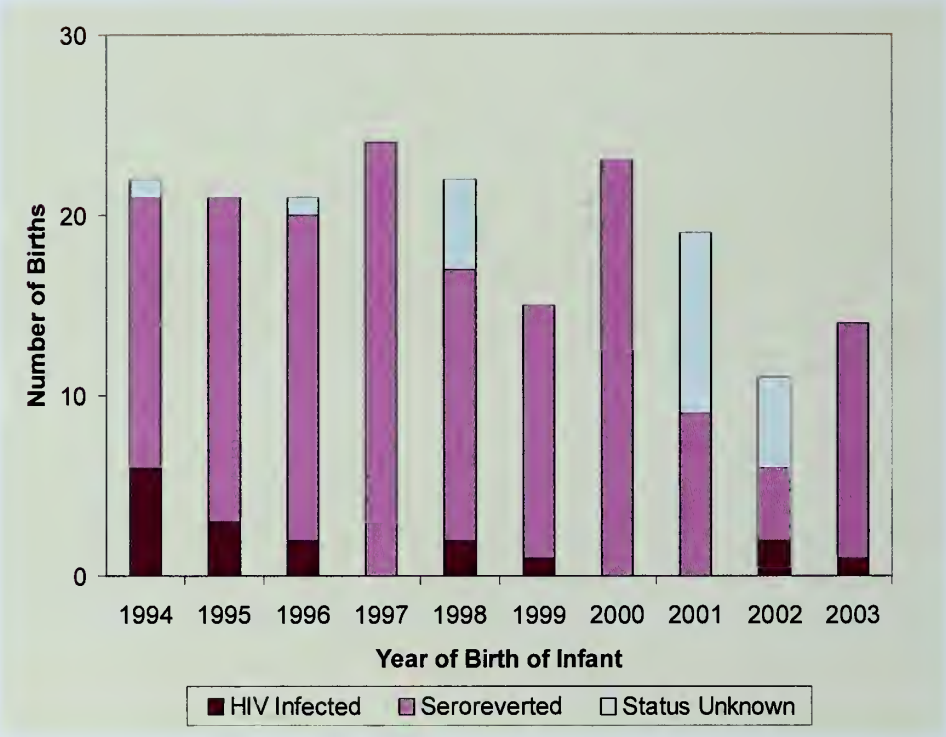
Through December 31, 2003, 322 infants were born to HIV-infected mothers in San Francisco (Table 13.1). Fifty-three (17%) of these infants were confirmed as HIV infected, 242 (75%) seroreverted (that is, were determined to be uninfected after maternal antibodies disappeared), and 27 (8%) were of unknown serostatus. Of the 53 HIV-infected infants, 11 are living with AIDS, 24 are living with HIV non-AIDS, 17 died of AIDS, and one died of HIV non-AIDS. Fifty-one percent of perinatally exposed infants were African American, 21% were white, and 19% were Latino.

Table 13.1 Infants born to HIV-infected mothers by infant's HIV status and race/ethnicity, San Francisco, through December 2003

	N (%)
Total	**322**
Infant HIV Status	
HIV-infected	53 (17)
AIDS (alive)	11 (3)
AIDS (dead)	17 (5)
HIV only (alive)	24 (8)
HIV only (dead)	1 (0)
Seroreverted (HIV-)	242 (75)
Unknown	27 (8)
Race/Ethnicity	
White	68 (21)
African American	163 (51)
Latino	60 (19)
Asian/Pacific Islander	24 (7)
Other/Unknown	7 (2)

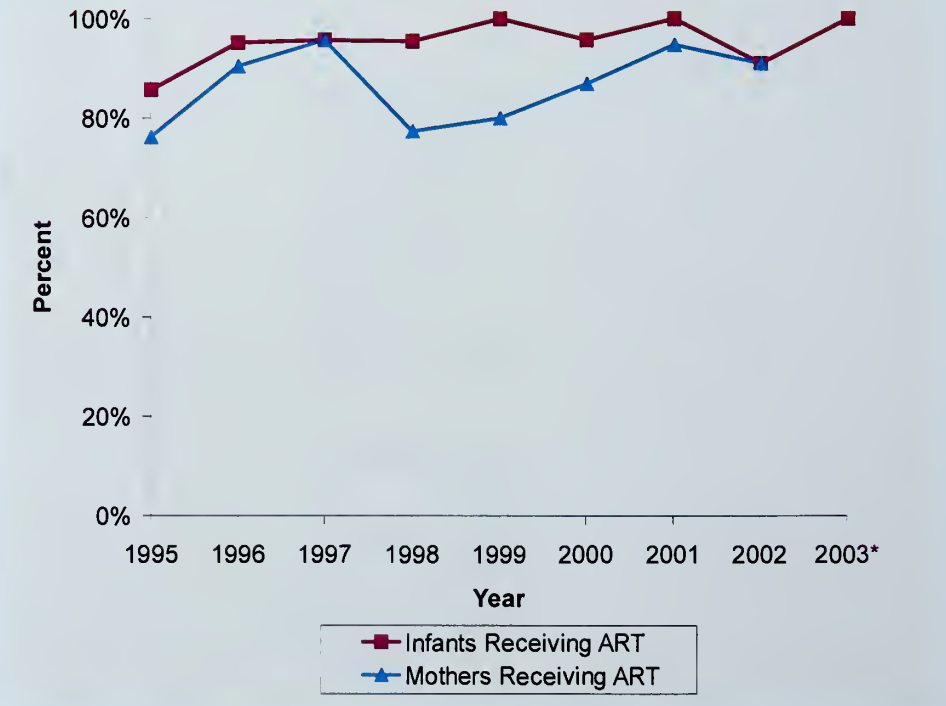
The number of perinatally exposed infants who were confirmed as HIV infected has declined since 1997 (Figure 13.2). Declines in perinatal transmission of HIV are due to the improved therapies for mothers throughout pregnancy and for infants to prevent perinatal transmission. In 2003, there were 14 infants born to HIV-infected mothers; one was HIV-infected, and 13 seroreverted.

Figure 13.2 Infants born to HIV-infected mothers by year of birth and infant's HIV status, San Francisco, 1994-2003



The vast majority of HIV-infected mothers received antiretroviral therapy (ART) during pregnancy (Figure 13.3). In 2003, all infants born to HIV-infected mothers received antiretroviral therapy. Percent of mothers receiving antiretroviral therapy in 2003 is not reported due to missing data on eight of 14 mothers.

Figure 13.3 Percent of HIV-infected mothers and their infants receiving antiretroviral therapy, San Francisco, 1995-2003



* The data on receipt of ART in 2003 are missing for 8 mothers (57%).

14 HIV/AIDS among Transgender Persons

AIDS surveillance data

Persons with AIDS are categorized as transgender if information regarding gender identity is listed in the medical record. Information on transgender status has been collected since 1996. As of December 31, 2003, a total of 308 transgender AIDS cases were diagnosed (Table 14.1). Seventy percent of transgender cases were non-white compared to 27% of total AIDS cases. Transgender persons with AIDS were more likely to inject drugs than were total AIDS cases (55% vs. 20%, respectively). Transgender AIDS cases were also younger than total AIDS cases.

Table 14.1 Characteristics of transgender* AIDS cases and cumulative AIDS cases diagnosed through December 2003, San Francisco

	Transgender AIDS Cases Diagnosed Through December		AIDS Cases Diagnosed Through December 2003	
Total	**308**		**29,056**	
Race/Ethnicity				
White	93	30%	21,281	73%
African American	100	32%	3,596	12%
Latino	85	28%	3,145	11%
Asian/Pacific Islander	27	9%	876	3%
Native American	3	1%	146	1%
Injection Drug Use				
Yes	169	55%	5,920	20%
No	139	45%	23,136	80%
Age at Diagnosis				
0 - 19	3	1%	109	<1%
20 - 29	78	25%	3,398	12%
30 - 39	138	45%	13,210	45%
40 - 49	72	23%	8,979	31%
50+	17	6%	3,360	12%

* See Technical Notes "Transgender Status."

HIV testing behaviors and knowledge of HIV reporting regulations

Information on HIV testing behaviors among male to female transgenders comes from the HIV Testing Survey, a venue-based study in which self-identified male to female transgenders were recruited from bars, clubs, streets, and agencies. Participants were interviewed about knowledge of HIV reporting regulations and the effect HIV reporting might have on deterring or delaying HIV testing. Participants were 18 years or older, residents of California for at least the past 6 months, and born male and identifying as female or transgender currently or at sometime in the past.

Of 181 eligible persons, 153 (85%) participated. One hundred forty (92%) of the subjects had tested for HIV and 34 (22%) knew they were HIV infected. Among the 13 subjects who had never been tested for HIV infection, three noted fear of having their name reported to the government if they tested positive as one reason they had not tested but none cited this as their most important reason for not testing.

Subjects were presented with several non-mutually exclusive descriptions of HIV reporting in California. Fifty-two (44%) participants correctly noted that California uses a unique identifier to report HIV infections (Table 14.2). However, only five (4%) subjects were able to correctly identify California's unique identifier reporting system and to correctly note that California does not use any other HIV reporting system. Among transgenders, HIV testing was high and fear of having their name reported to the government was an infrequent reason for not testing. HIV reporting does not appear to be a substantial deterrent to HIV testing in this population.

Table 14.2 Knowledge of HIV reporting regulations among male to female transgenders (N=117*), the HIV Testing Survey, San Francisco

Type of HIV reporting thought to occur in California	Number	%
Name-based		
Yes	26	22%
No	42	36%
Don't know	49	43%
Unique identifier		
Yes	52	44%
No	13	11%
Don't know	52	44%
Name to code		
Yes	25	21%
No	25	21%
Don't know	67	57%
Demographic and risk information reported without name or code		
Yes	37	32%
No	21	18%
Don't know	59	50%
Correctly identified California HIV reporting regulations†	5	4%

* Excludes persons who reported having HIV infection. California implemented HIV reporting on July 1, 2002. Two participants were interviewed before July 2002 and were eliminated from this table.

† Participants must have answered 'no' to all questions regarding the type of HIV reporting conducted in California except for unique identifier reporting to which they must have answered 'yes'.

15 Homeless Persons with AIDS

AIDS surveillance data

Information on homelessness among persons diagnosed with AIDS has been collected since 1990. A case is classified as homeless if, at the time of AIDS diagnosis, the medical record states that the patient is homeless or the patient's address is a known homeless shelter or a health care clinic or a free postal address not connected to a residence ('general delivery'). Persons for whom information on residence is missing are not classified as homeless. The proportion of homeless AIDS cases increased sharply between 1996 and 1999, stabilized through 2002 and recently declined (Figure 15.1). For 2003, 11% of AIDS cases were homeless at the time of diagnosis, down from 14% the previous year.

Compared to the total number of AIDS cases diagnosed between 1994 and 2003, homeless persons with AIDS were more likely to be women, African American, injection drug users (including MSM IDU), and younger (Table 15.1).

Figure 15.1 Number and percent of homeless AIDS cases by year of diagnosis, San Francisco, 1994-2003

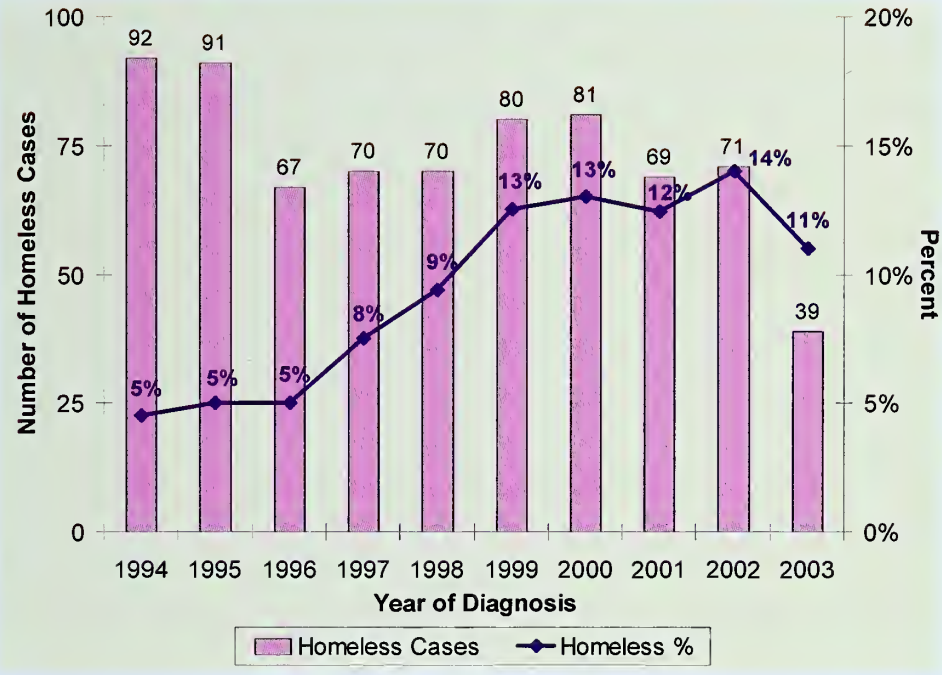


Table 15.1 Characteristics of homeless AIDS cases and AIDS cases diagnosed between 1994 and 2003, San Francisco

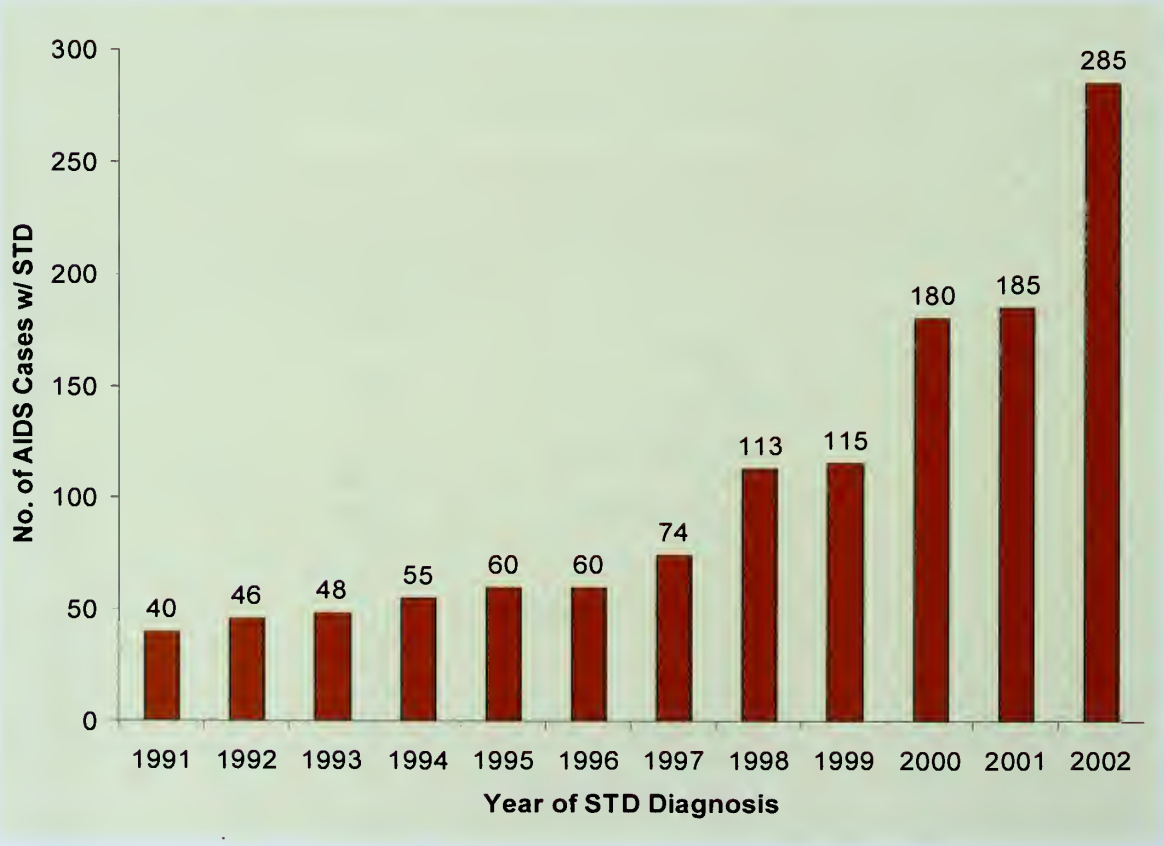
	Homeless AIDS Diagnosed 1994-2003 (N=730)	AIDS Cases Diagnosed 1994-2003 (N=9,339)
Gender		
Male	86%	93%
Female	14%	7%
Race/Ethnicity		
White	44%	64%
African American	38%	17%
Latino	15%	13%
Other	2%	5%
Exposure Category		
MSM	21%	69%
IDU	44%	12%
MSM IDU	31%	14%
Heterosexual	3%	3%
Other	2%	2%
Age at Diagnosis		
0 - 19	1%	<1%
20 - 29	15%	10%
30 - 39	44%	43%
40 - 49	32%	33%
50+	9%	13%

16 Sexually Transmitted Diseases among Persons with AIDS

AIDS and STD surveillance data

Diagnosis of sexually transmitted diseases (STD) occurring among persons with AIDS was determined through a computerized match of the AIDS and STD case registries through 2002. A match was verified by name, date of birth, and gender. The STD registry included persons reported with gonorrhea, chlamydia, non-gonococcal urethritis, or infectious syphilis. Cases of STDs among persons with AIDS have steadily risen since 1991 with a dramatic jump in 2002 (Figure 16.1). All STDs occurred after the AIDS diagnosis indicating unprotected sex among persons known to be HIV-infected. The increase in STDs among persons with AIDS in 2002 could be expected due to the steep increases in male rectal gonorrhea (see Figure 8.8) and syphilis (see Figure 8.9), particularly among MSM, reported in 2002.

Figure 16.1 Number of AIDS cases diagnosed with an STD by year of STD diagnosis, San Francisco, 1991-2002



Technical Notes

AIDS Incidence Rates

Annual race-specific rates are calculated as the number of cases diagnosed for a particular race/ethnic group during each year divided by the population for that race/ethnicity, multiplied by 100,000. These rates are calculated separately for males and females. Population denominators are based on the population projections for the years 1993-2003, from the Demographic Research Unit, Department of Finance, California (www.dof.ca.gov).

AIDS Survival

Survival was calculated as the time between the date of initial AIDS diagnosis and the date of death. This includes persons with low CD4 (count<200 or percent<14%) and persons diagnosed with AIDS opportunistic illnesses. The follow-up information of cases was obtained through retrospective and prospective reviews of laboratory records and medical charts. Dates of death were obtained through review of local death certificates, reports from the State Office of AIDS, and matches with the National Death Index (NDI). The most recent NDI match included deaths that occurred through December 31, 2001. Persons not known to have died were censored at the date of their last known follow-up or at December 31, 2001, whichever was more recent.

Causes of Death

Cause of death information on death certificates is coded using the International Classification of Diseases, 10th revision (ICD-10) for deaths occurring in 1999 or after, and the 9th revision (ICD-9) for deaths occurring prior to 1999. These codes are then processed and evaluated using a computer system to determine the underlying and contributory causes of death (www.cdc.gov/nchs/about/major/dvs/im.htm). We obtained the ICD coded causes of death from the California multiple-cause-of-death computer tape for persons with AIDS who died prior to 1996. For AIDS deaths that occurred in 1996 and after, the cause of death information was obtained through the match with the National Death Index. Deaths attributable to HIV infection or AIDS are coded as 042-044 under ICD-9 and B20-B24 under ICD-10. In addition, the AIDS opportunistic illnesses, if listed on death certificates, are included in the category of 'HIV/AIDS' cause of death.

Grouping of Data Categories

Data regarding certain race/ethnic or risk categories are grouped together when the number of persons with HIV/AIDS in that particular group is small and/or does not present significant trends. For example, "Other" in the Race/Ethnicity breakdown represents Asian/Pacific Islander and Native American; "Other" in the Exposure Category breakdown includes transfusion, hemophilia, heterosexual, perinatal AIDS, or persons of unidentified risk.

Serological Testing Algorithm for Recent HIV Seroconversion

HIV incidence was derived by applying the Serological Testing Algorithm for Recent HIV Seroconversion (STARHS) to HIV positive specimens that were collected in the HIV prevalence surveys and from anonymous voluntary HIV counseling and testing sites (McFarland, et al., 1999). Retested HIV-positive specimens that were nonreactive on the less sensitive assay were defined as recent HIV infections (seroconverting within the preceding 170 days). HIV incidence was calculated as the number of recent infections divided by the number of recent infections plus the number of HIV negative specimens. HIV incidence, expressed as percent per year, was estimated by multiplying the rate of recent infection by (365 ÷ 170) x 100.

Transgender Status

In September 1996, the San Francisco Department of Public Health began noting transgender status when this information is contained in the medical record. Transgender individuals are listed as either male-to-female or female-to-male. Please note that there are several limitations to our transgender data. We believe that our report likely underestimates the number of transgender persons affected by AIDS because data collected for AIDS reporting are derived from the medical record. Consequently, information that may be discussed with the health care provider but not recorded in the medical record is generally not available for the purposes of AIDS case reporting. Because information about transgender status was not collected in a uniform way until September 1996, we have limited data on transgender prior to this, and therefore cannot perform valid time trend analysis for this group.

Treatments

The type and starting date of HIV antiretroviral therapy is obtained at the time of initial case report and through prospective reviews of medical records. Persons noted to have received a protease inhibitor or a nonnucleoside reverse transcriptase inhibitor were considered to have received highly active antiretroviral therapy (HAART). Use of HIV therapies among persons living with AIDS by year was calculated as the number of persons who were not known to have died at the end of each year and who started the treatment prior to or during that year, divided by the total number of persons living with AIDS at the end of each year. Use of HAART among persons living with AIDS by gender, race/ethnicity, and risk was calculated as the number of persons living with AIDS as of December 31, 2003, for each gender, race, or risk group who were noted to have ever received HAART, divided by the total number of persons living with AIDS as of December 31, 2003, for each gender, race, and risk group. Persons whose medical records or treatment information were not available were excluded.

D Data Tables

Figure 1.1 AIDS cases, deaths, and prevalence, San Francisco, 1980-2003 3

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cases	4	31	117	317	623	960	1417	1850	2003	2479	2334	2575
Deaths	0	9	37	136	309	602	906	979	1166	1441	1579	1732
Persons Living with AIDS	4	26	106	287	601	959	1470	2341	3178	4216	4971	5814

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Cases	2648	2359	2030	1759	1222	929	746	638	608	555	497	355
Deaths	1819	1786	1809	1680	1121	465	454	410	382	356	232	206
Persons Living with AIDS	6643	7216	7437	7516	7617	8081	8373	8601	8827	9026	9291	9440

Figure 2.1 Number of AIDS cases by race/ethnicity, San Francisco, 1994-2003 4

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	1411	1210	763	598	481	377	353	332	302	182
African American	291	263	220	168	150	117	125	113	93	71
Latino	247	210	176	122	82	107	95	71	72	73
Other	81	76	63	41	33	37	35	39	30	29

Figure 2.2 Male annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1994-2003 5

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	825	724	447	356	282	221	204	193	181	110
African American	611	577	428	338	305	222	236	225	191	139
Latino	398	336	252	171	116	145	121	96	96	93
Other	61	59	45	27	23	24	23	25	19	20

Figure 2.3 Female annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1994-2003 5

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	20	16	17	10	11	10	13	12	7	5
African American	128	117	115	81	76	66	66	54	39	34
Latina	29	14	29	17	8	13	19	6	8	6
Other	8	6	3	4	1	4	1	3	2	2

Figure 2.4 Number of male AIDS cases by exposure category, San Francisco, 1994 - 2003 6

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MSM	1473	1265	817	639	481	393	365	345	326	237
IDU	117	122	98	86	66	58	61	48	40	47
MSM IDU	276	231	150	100	113	89	78	72	65	25
Other	28	34	27	17	14	25	22	27	19	8

Figure 2.5 Number of female AIDS cases by exposure category, San Francisco, 1994-2003 6

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
IDU	69	52	58	39	35	38	37	31	18	14
Heterosexual	29	22	28	20	15	15	21	10	13	11
Other	11	12	8	6	6	2	4	7	4	4

Figure 7.1 Trends in insurance status among persons with AIDS by gender, San Francisco, 1998-2003 19

Male						
Year	1998	1999	2000	2001	2002	2003
Public	13%	13%	16%	16%	19%	16%
Private	42%	41%	42%	45%	45%	50%
None	43%	40%	37%	33%	33%	33%

Female						
Year	1998	1999	2000	2001	2002	2003
Public	48%	65%	50%	56%	26%	52%
Private	25%	13%	19%	15%	17%	14%
None	23%	18%	23%	23%	46%	34%

Transgender						
Year	1998	1999	2000	2001	2002	2003
Public	25%	22%	40%	27%	33%	33%
Private	13%	6%	10%	13%	8%	0%
None	63%	61%	45%	60%	50%	56%

Figure 8.1 AIDS cases, deaths, and prevalence among MSM, San Francisco, 1994 - 2003 20

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Cases	1775	1517	1002	760	610	500	461	432	403	271
Deaths	1633	1507	976	382	365	325	308	275	176	157
Persons Living with AIDS	6624	6634	6660	7038	7283	7458	7611	7768	7995	8109

Figure 8.2 AIDS cases among MSM by race/ethnicity, San Francisco, 1994-2003 . .20

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	1328	1136	682	544	431	326	305	291	267	152
African American	181	139	127	87	77	59	56	56	47	35
Latino	201	182	139	100	73	85	72	56	63	63
Other	65	60	54	29	29	30	28	29	26	21

Figure 8.4 Percent of MSM reporting UAI with a partner known to be HIV-positive, anonymous testing sites, San Francisco, 1998 - 2003 21

Year	1998	1999	2000	2001	2002	2003
Any UAI	9.9%	11.0%	11.2%	9.9%	8.0%	9.7%
Receptive UAI	4.2%	5.4%	4.9%	4.8%	3.9%	3.3%
Insertive UAI	8.8%	9.4%	10.2%	8.6%	7.1%	8.7%

Figure 8.5 Percent of MSM reporting UAI by self-reported HIV status in the last six months, the Stop AIDS Project, San Francisco, 1998-2003 22

Year	1998	1999	2000	2001	2002	2003
HIV Positive	38%	42%	46%	51%	45%	54%
HIV Negative	34%	32%	36%	37%	32%	45%
HIV Status Unknown	27%	25%	26%	26%	23%	47%

Figure 8.6 Percent of MSM reporting UAI with at least one partner of unknown HIV status in the last six months, the Stop AIDS Project, San Francisco, 1998-2003 22

Year	1998	1999	2000	2001	2002	2003
HIV Positive	22%	26%	26%	31%	27%	18%
HIV Negative	12%	15%	17%	20%	16%	14%
HIV Status Unknown	11%	12%	11%	16%	13%	5%

Figure 8.7 Trends in UAI, potentially serodiscordant UAI and UVI among MSMW and MSM, the Stop AIDS Project, San Francisco, July 1998 - June 2003 23

Year	1998	1999	2000	2001	2002	2003
UAI among MSM	32%	33%	37%	39%	33%	40%
UAI among MSMW	25%	26%	32%	29%	32%	30%
Potentially serodiscordant UAI among MSM	13%	16%	17%	21%	17%	19%
Potentially serodiscordant UAI among MSMW	11%	13%	19%	21%	19%	16%
UVI among MSMW	19%	23%	28%	31%	23%	21%

Figure 8.9 Syphilis among MSM, San Francisco, 1997-2003 25

Year	1997	1998	1999	2000	2001	2002	2003
Primary	2	3	3	13	44	96	105
Secondary	15	2	19	27	72	190	209
Early Latent	3	4	10	12	38	151	158

Figure 9.1 AIDS cases, deaths, and prevalence among non-MSM IDU, San Francisco, 1994-2003 26

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Cases	187	174	157	125	101	96	100	79	58	61
Deaths	112	123	114	66	73	75	55	65	45	41
Persons Living with AIDS	590	641	684	743	771	792	837	851	864	884

Figure 9.2 AIDS cases among non-MSM IDU by race/ethnicity, San Francisco, 1994-2003 26

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	60	50	60	41	37	42	37	35	24	26
African American	90	100	74	63	58	45	53	37	32	24
Latino	28	14	18	15	5	6	8	5	1	7
Other	9	10	5	6	1	3	2	2	1	4

Figure 10.1 AIDS cases, deaths, and prevalence among heterosexuals, San Francisco, 1994-2003 28

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Cases	34	31	35	25	17	22	27	19	21	12
Deaths	24	21	13	10	5	6	6	8	7	6
Persons Living with AIDS	112	122	144	159	171	187	208	219	233	239

Figure 10.2 AIDS cases among heterosexuals by race/ethnicity, San Francisco, 1994-2003 28

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	11	10	7	8	7	4	6	3	5	1
African American	12	12	13	10	8	10	12	9	9	10
Latino	9	7	12	4	1	6	7	3	4	1
Other	2	2	3	3	1	2	2	4	3	0

Figure 10.3 HIV prevalence rate among blood donations, San Francisco Bay Area, 1985-2003 29

Year	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Rate per 100,000 Donations	111	45	33	26	11	13	10	8	4	7

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003
Rate per 100,000 Donations	5	3	6	5	2	2	1	4	5

Figure 11.1 AIDS cases, deaths, and prevalence among women, San Francisco, 1994-2003 31

year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Cases	109	86	94	65	56	55	62	48	35	29
Deaths	67	53	56	26	26	39	29	30	20	17
Persons Living with AIDS	335	368	406	445	475	491	524	542	557	569

Figure 11.2 Female AIDS cases by race/ethnicity, San Francisco, 1994-2003 31

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	32	25	27	16	18	15	21	18	11	8
African American	51	46	46	33	31	27	27	22	16	14
Latina	16	8	17	10	5	8	12	4	5	4
Other	10	7	4	6	2	5	2	4	3	3

Figure 13.2 Infants born to HIV-infected mothers by year of birth and infant's HIV status, San Francisco, 1994-2003 36

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
HIV Infected	6	3	2	0	2	1	0	0	2	1
Seroreverted	15	18	18	24	15	14	23	9	4	13
Status Unknown	1	0	1	0	5	0	0	10	5	0

Figure 13.3 Percent of HIV-infected mothers and their infants receiving antiretroviral therapy, San Francisco, 1995-2003 36

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003
Infants Receiving ART	86%	95%	96%	95%	100%	96%	100%	91%	100%
Mothers Receiving ART	76%	90%	96%	77%	80%	87%	95%	91%	



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Contents

Contents i
List of Figures and Tables ii
Letter to Colleagues vii
Executive Summary viii
1. Overview of HIV/AIDS in San Francisco 1
2. Trends in AIDS Incidence 8
3. Survival among Persons with AIDS 12
4. Trends in AIDS Mortality 16
5. Persons Living with AIDS 20
6. Use of HAART among Persons with AIDS 21
7. Insurance Status and Facility of Diagnosis 23
8. HIV/AIDS among Men Who Have Sex with Men 25
9. HIV/AIDS among Injection Drug Users 38
10. HIV/AIDS among Heterosexuals 40
11. HIV/AIDS among Women 44
12. HIV/AIDS among Adolescents and Young Adults 46
13. HIV/AIDS among Children 47
14. HIV/AIDS among Transgender Persons 50
15. HIV/AIDS among Homeless Persons 52
16. Sexually Transmitted Diseases among Persons with AIDS 54
17. Late HIV Testing 55
18. Geographic Distribution of HIV/AIDS 56
Technical Notes 60
Data Tables 62

List of Figures and Tables

1. Overview of HIV/AIDS in San Francisco

Table 1.1 Characteristics of cumulative AIDS cases in San Francisco, California, and the United States 1

Table 1.2 Cumulative AIDS cases by gender, exposure category, and race/ethnicity, diagnosed through December 2004, San Francisco 2

Figure 1.1 AIDS cases, deaths, and prevalence, San Francisco, 1980-2004 3

Table 1.3 Characteristics of persons reported with HIV non-AIDS, San Francisco, July 2002 - March 2005 4

Figure 1.2 Living HIV and AIDS cases by gender, San Francisco, December 2004 5

Figure 1.3 Living male HIV and AIDS cases by race/ethnicity, San Francisco, December 2004 . . .6

Figure 1.4 Living female HIV and AIDS cases by race/ethnicity, San Francisco, December 2004 .6

Figure 1.5 Living male HIV and AIDS cases by exposure category, San Francisco, December 2004 7

Figure 1.6 Living female HIV and AIDS cases by exposure category, San Francisco, December 2004 7

2. Trends in AIDS Incidence

Figure 2.1 Number of AIDS cases by race/ethnicity, San Francisco, 1995-2004 8

Figure 2.2 Male annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1995-2004 9

Figure 2.3 Female annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1995-2004 9

Figure 2.4 Number of male AIDS cases by exposure category, San Francisco, 1995-2004 10

Figure 2.5 Number of female AIDS cases by exposure category, San Francisco, 1995-2004 10

Table 2.1 AIDS cases by gender and age at diagnosis, diagnosed 1994-2004, San Francisco 11

3. Survival among Persons with AIDS

Figure 3.1 Kaplan-Meier survival curves for persons diagnosed with AIDS in 1980-1989, 1990-1995, and 1996-2004, San Francisco 12

Figure 3.2 Kaplan-Meier survival curves for persons diagnosed with AIDS between 1996 and 2004 by race/ethnicity, San Francisco 13

Figure 3.3 Kaplan-Meier survival curves for persons diagnosed with AIDS between 1996 and 2004 by exposure category, San Francisco 14

Figure 3.4 Kaplan-Meier survival curves for persons diagnosed with AIDS between 1996 and 2004 by gender, San Francisco 15

4. Trends in AIDS Mortality

Table 4.1 Deaths in persons with AIDS, by gender, race/ethnicity, and exposure category, San Francisco, 2001-2004 16

Figure 4.1 Death rates due to HIV/AIDS-related and non-HIV/AIDS-related causes among persons with AIDS, San Francisco, 1993-2002 17

Table 4.2 Underlying causes of death among persons with AIDS, San Francisco, 1993-2002 ...18

Table 4.3 Multiple causes of death among persons with AIDS, San Francisco, 1993-2002 19

5. Persons Living with AIDS

Table 5.1 Persons living with AIDS by demographic and risk characteristics, San Francisco, 2001-2004 20

6. Use of HAART among Persons with AIDS

Figure 6.1 Use of HAART among persons living with AIDS, San Francisco, 1995-2004 21

Figure 6.2 Use of HAART among persons living with AIDS by gender, race/ethnicity, and exposure category, San Francisco, December 2004 22

Figure 6.3 Use of HAART among AIDS cases diagnosed between 1996 and 2004 by gender, race/ethnicity, and exposure category, San Francisco 22

7. Insurance Status and Facility of Diagnosis

Figure 7.1 Trends in insurance status among persons with AIDS by gender, San Francisco, 1999-2004 23

Figure 7.2 AIDS cases by gender and insurance status at diagnosis, San Francisco, 1999-2004 ...23

Figure 7.3 AIDS cases by gender and type of diagnosing facility, San Francisco, 1999-2004 24

Figure 7.4 AIDS cases by race/ethnicity and type of diagnosing facility, San Francisco, 1999 - 2004 24

8. HIV/AIDS among Men Who Have Sex with Men

Figure 8.1 AIDS cases, deaths, and prevalence among MSM, San Francisco, 1995-2004 25

Figure 8.2 AIDS cases among MSM by race/ethnicity, San Francisco, 1995-2004 25

Figure 8.3 Percent of MSM reporting unprotected anal intercourse by self-reported HIV status in the last six months, the Stop AIDS Project, San Francisco, 1998-2004 26

Figure 8.4 Percent of MSM reporting unprotected anal intercourse with at least one partner of unknown HIV status in the last six months, the Stop AIDS Project, San Francisco, 1998-2004 26

Figure 8.5 Gender of sexual partners in the past 12 months, the Behavioral Risk Factor Survey, San Francisco, November 2001- June 2002 27

Figure 8.6 The racial breakdown by gender of sexual partners, the Behavioral Risk Factor Survey, San Francisco, November 2001- June 2002 27

Figure 8.7 MSM telephone survey participants and San Francisco adult male population by race/ethnicity, 2002 28

Figure 8.8 HIV prevalence by race among MSM, Telephone Survey, San Francisco, 2002 28

Table 8.1 Unprotected insertive anal intercourse among HIV-positive MSM with non primary partners whose HIV status was negative or unknown, Telephone Survey, San Francisco, 2002 29

Table 8.2 Unprotected receptive anal intercourse among HIV-negative MSM with non primary partners whose HIV status was positive or unknown, Telephone Survey, San Francisco, 2002 30

Table 8.3 Illicit drug use among MSM, Telephone Survey, San Francisco, 2002 31

Table 8.4 Prevalence of Viagra use among MSM, Telephone Survey, San Francisco, 2002 32

Figure 8.9 HIV prevalence among MSM, the National Behavioral Surveillance Survey, San Francisco, 2003-2004 33

Figure 8.10 HIV prevalence among MSM by race/ethnicity, the National Behavioral Surveillance Survey, San Francisco, 2003-2004 33

Figure 8.11 HIV prevalence among MSM by age, the National Behavioral Surveillance Survey, San Francisco, 2003-2004 34

Figure 8.12 Substance use in the past 12 months among MSM, the National Behavioral Surveillance Survey, San Francisco, 2003-2004 34

Figure 8.13 HIV incidence overall and by methamphetamine use, the EXPLORE study, San Francisco, 1999-2003 35

Table 8.5 Baseline drug use among MSM, the EXPLORE study, San Francisco, 1999-2003 35

Figure 8.14 Male rectal gonorrhea and male gonococcal proctitis among MSM, San Francisco, 1997-2004 36

Figure 8.15 Syphilis among MSM, San Francisco, 1997-2004 37

9. HIV/AIDS among Injection Drug Users

Figure 9.1 AIDS cases, deaths, and prevalence among non-MSM IDU, San Francisco, 1995 - 2004 38

Figure 9.2 AIDS cases among non-MSM IDU by race/ethnicity, San Francisco, 1995-2004 38

Table 9.1 Injection drug use-associated AIDS cases by exposure category and race/ethnicity, diagnosed through December 2004, San Francisco 39

10. HIV/AIDS among Heterosexuals

Figure 10.1 AIDS cases, deaths, and prevalence among heterosexuals, San Francisco, 1995-2004 .40

Figure 10.2 AIDS cases among heterosexuals by race/ethnicity, San Francisco, 1995-2004 40

Table 10.1 AIDS cases among heterosexuals by exposure category and gender, diagnosed through December 2004, San Francisco 41

Figure 10.3 HIV cases among military recruits, San Francisco, 1989-2003 41

Figure 10.4 HIV prevalence rate among blood donations and donors through 2004, San Francisco Bay Area 42

Figure 10.5 Syphilis among heterosexual men, San Francisco, 1997- 2004 43

Figure 10.6 Syphilis among women, San Francisco, 1997- 2004 43

11. HIV/AIDS among Women

Figure 11.1 AIDS cases, deaths, and prevalence among women, San Francisco, 1995-2004 44

Figure 11.2 Female AIDS cases by race/ethnicity, San Francisco, 1995-2004 44

Figure 11.3 Female AIDS cases diagnosed through December 2004 and female population by race/ethnicity, San Francisco 45

Figure 11.4 Female AIDS cases diagnosed through December 2004 by exposure category, San Francisco 45

12. HIV/AIDS among Adolescents and Young Adults

Table 12.1 Adolescent and young adult AIDS cases by exposure category, gender, and race/ethnicity, diagnosed through December 2004, San Francisco 46

13. HIV/AIDS among Children

Figure 13.1 Pediatric AIDS cases by year of diagnosis, San Francisco, 1980-2004 47

Table 13.1 Infants born to HIV-infected mothers by infant HIV status and race/ethnicity, San Francisco, December 2004 48

Figure 13.2 Infants born to HIV-infected mothers by year of birth and infant HIV status, San Francisco, 1994-2004 49

Figure 13.3 Percent of HIV-infected mothers and their infants receiving antiretroviral therapy, San Francisco, 1995-2004 49

14. HIV/AIDS among Transgender Persons

Table 14.1 Characteristics of transgender AIDS cases and cumulative AIDS cases diagnosed through December 2004, San Francisco 50

Table 14.2 Exposure to and use of HIV prevention services in past 12 months among male to female transgenders, the HIV Testing Survey, San Francisco, June 2002-October 2002 51

15. HIV/AIDS among Homeless Persons

Figure 15.1 Number and percent of homeless AIDS cases by year of diagnosis, San Francisco, 1995-2004 52

Table 15.1 Characteristics of homeless AIDS cases and AIDS cases diagnosed between 1995 and 2004, San Francisco 52

Table 15.2 Characteristics of living homeless HIV/AIDS cases and REACH study participants, San Francisco, December 2004 53

16. Sexually Transmitted Diseases among Persons with AIDS

Figure 16.1 Number of AIDS cases diagnosed with an STD by year of STD diagnosis, San Francisco, 1991-2003 54

17. Late HIV Testing

Table 17.1 Characteristics of late HIV testers, San Francisco, 2001-2004 55

18. Geographic Distribution of HIV/AIDS

Map 18.1 Distribution of persons living with HIV/AIDS, San Francisco, December 2004 56

Map 18.2 Distribution of HIV/AIDS cases with unmet need for medical care in 2003, San Francisco 57

Map 18.3 Use of HAART among persons diagnosed with AIDS by neighborhood, San Francisco, 1996-2004 58

Map 18.4 Survival among persons diagnosed with AIDS by neighborhood, San Francisco, 1996-2004 59

Dear Colleague,

We want to call your attention to a recent change in how we present the San Francisco AIDS surveillance data. Beginning in 2005, publications of our data were changed to include only persons who were residents of San Francisco at the time they were diagnosed with AIDS. Prior to this change, our reports also included persons who were diagnosed with AIDS at a San Francisco medical facility, but who were residents elsewhere at the time of their diagnosis.

We have decided to exclude non-San Francisco residents from the data presentations because AIDS case reporting practices result in our having a complete count of San Francisco residents with AIDS, but an incomplete record of non-San Francisco residents with AIDS. In order to provide consistent AIDS surveillance data, our surveillance quarterly and annual reports will include only reports of persons diagnosed with HIV or AIDS who were residents of San Francisco at the time of their diagnosis. Consequently, the numbers in reports from 2005 and on will differ from reports published prior to 2005.

You may contact the HIV/AIDS Statistics, Epidemiology, and Intervention Research Section of the San Francisco Department of Public Health at (415) 554-9050 if you have questions concerning our reports.

Thank you for your interest,

The HIV/AIDS Statistics, Epidemiology
and Intervention Research Section Staff

Executive Summary

We alert you to two changes that affect interpretation of numbers in this report.

First, AIDS cases now only include residents of San Francisco at time of diagnosis. Past reports included persons diagnosed in San Francisco whether they were residents or not. The impact of this change is a reduction in AIDS cases in this report compared to past reports because persons outside of San Francisco tend to seek AIDS care in our city. For example, a cumulative total of 29,056 AIDS cases were reported through 2003 last year; the new count of resident-only cases through 2004 is 26,110.

Second, our report now includes HIV non-AIDS cases, presented separately. Interpretation of HIV non-AIDS cases must be cautious. HIV non-AIDS cases do not include persons tested anonymously, persons not in care, and persons unaware of their infection (estimated to be 20% of persons infected with HIV in San Francisco). Moreover, there are a few thousand potential case reports yet to be confirmed by our office. HIV non-AIDS case reports therefore underestimate true numbers.

After several years of declining numbers, AIDS cases have stabilized: we expect around 400 to 500 new AIDS diagnoses and 300 to 400 deaths among AIDS patients each year. However, delays in reporting of cases and deaths result in an artificial decrease in numbers for recent years, especially for 2004. With lower numbers of cases than in the past, observed fluctuations may reflect the relative completeness of data rather than long-term trends. This phenomenon points to caution in interpreting several recent trends. For example, we noted an increase in the number of AIDS cases diagnosed in 2003 compared to 2002 after we received delayed case reports. We also noted that the rate of AIDS per 100,000 in Latino males surpassed that of white males in 2003, after receipt of delayed case reports. Moreover, our national ranking in terms of AIDS cases per 100,000 has changed from 12th in 2002 to 3rd in 2003.

AIDS and HIV non-AIDS data for our city remain consistent on several facts. The largest proportion of cases remains among men who have sex with men (MSM), followed by MSM who inject drugs. Together, they account for 85% of persons living with AIDS or recently diagnosed with HIV. This report includes results of special studies conducted among MSM that identify risks for HIV infection, including use of methamphetamine and other drugs, exchange of sex for money or drugs, sexually transmitted diseases, finding sex partners on the Internet, and use of Viagra. Non-MSM injection drug users continue to account for the third largest number of HIV and AIDS cases, 9% overall. We continue to recognize communities vulnerable or disproportionately affected by HIV/AIDS, including male-to-female transgenders and the homeless. HIV/AIDS cases remain relatively infrequent among heterosexuals, children, and blood transfusion recipients.

The stability we are witnessing in this phase of the epidemic is not good news; 500 new cases and 400 deaths each year translate to considerable morbidity and mortality in our city. We cannot be complacent in prevention and care.

1 Overview of HIV/AIDS in San Francisco

AIDS surveillance data

As of December 31, 2004, a cumulative total of 26,110 San Francisco residents were diagnosed with AIDS (Table 1.1). This comprises 19% of California AIDS cases and three percent of cases reported nationally. As of December 2003, San Francisco ranked third in the cumulative number of AIDS cases as well as the AIDS incidence rate in 2003 among metropolitan areas nationwide. Compared to California and the United States as a whole, AIDS cases in San Francisco are more likely to be male, white, and to occur among men who have sex with men (MSM), including MSM who also inject drugs (MSM IDU).

Table 1.1 Characteristics of cumulative AIDS cases in San Francisco, California, and the United States#

	San Francisco (N = 26,110)		California (N = 135,975)	United States (N = 902,223)
	Number	%	%	%
Gender				
Male	24,779	95%	91%	81%
Female	1,010	4%	8%	19%
Transgender*	321	1%	<1%	--
Race/Ethnicity				
White	18,946	73%	57%	41%
African American	3,265	12%	18%	39%
Latino	2,956	11%	22%	18%
Asian/Pacific Islander	783	3%	2%	<1%
Native American	134	1%	<1%	<1%
Other/Unknown	26	<1%	<1%	<1%
Exposure Category				
MSM	19,696	75%	68%	45%
IDU	1,962	8%	10%	25%
MSM IDU	3,728	14%	9%	6%
Heterosexual	328	1%	5%	12%
Transfusion/Hemophilia	168	1%	2%	2%
Other/Unidentified	228	1%	5%	10%

San Francisco data are reported through March 8, 2005 for cases diagnosed through December 2004; California data are reported through December 2004; U.S. data are reported through December 2003.

* Transgender data are not reported by the United States. See Technical Notes "Transgender Status."

In San Francisco, MSM account for the majority of male AIDS cases within all race/ethnic groups (Table 1.2). Among African American men, heterosexual injection drug use is the second most frequent exposure category. MSM IDU represents the second most frequent exposure category among men of all other race/ethnic groups and particularly prominent among Native American men. One percent or less of men with AIDS acquired HIV infection through heterosexual contact.

Injection drug use is the most frequent exposure category among white, African American, Latina, and Native American women with AIDS, followed by heterosexual contact. Among Asian/Pacific Islander women, equal percentages of women acquired their HIV infection through injection drug use as through heterosexual contact. In addition, twenty percent of Asian/Pacific Islander women were infected with HIV through transfusion of blood or blood products.

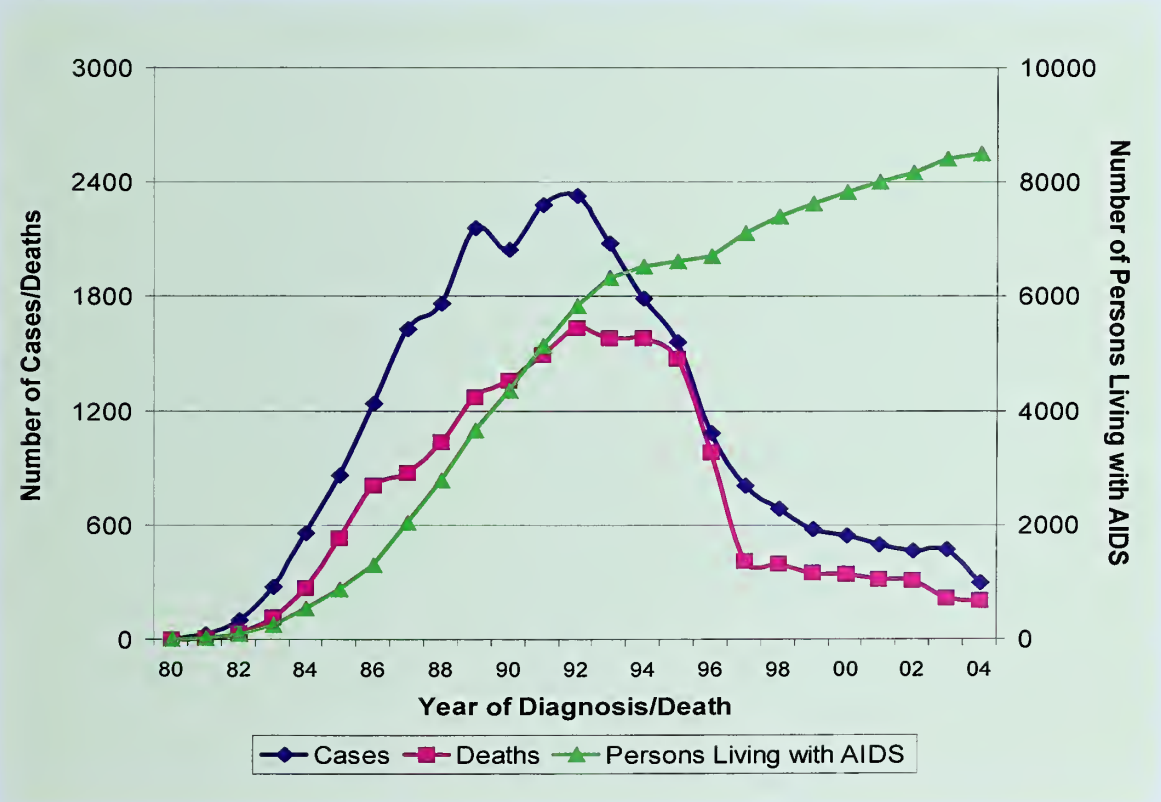
Table 1.2 Cumulative AIDS cases by gender, exposure category, and race/ethnicity, diagnosed through December 2004, San Francisco

	White		African American		Latino		Asian/Pacific Islander		Native American	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Male										
MSM	15,312	(83)	1,431	(53)	2,142	(79)	592	(85)	61	(51)
IDU	473	(3)	647	(24)	157	(6)	19	(3)	10	(8)
MSM IDU	2,608	(14)	520	(19)	332	(12)	46	(7)	45	(38)
Heterosexual	30	(<1)	30	(1)	18	(1)	6	(1)	1	(1)
Transfusion/ Hemophilia	51	(<1)	17	(1)	23	(1)	14	(2)	0	(0)
Other/Unidentified	44	(<1)	50	(2)	54	(2)	22	(3)	2	(2)
Male Subtotal	**18,518**		**2,695**		**2,726**		**699**		**119**	
Female										
IDU	217	(65)	334	(71)	66	(49)	21	(38)	11	(92)
Heterosexual	77	(23)	94	(20)	48	(36)	21	(38)	1	(8)
Transfusion/ Hemophilia	29	(9)	13	(3)	10	(7)	11	(20)	0	(0)
Other/Unidentified	13	(4)	28	(6)	11	(8)	2	(4)	0	(0)
Female Subtotal	**336**		**469**		**135**		**55**		**12**	
Transgender	**92**		**101**		**95**		**#**		**#**	

Data not available.

The number of new AIDS cases diagnosed among San Francisco residents peaked in 1992 at 2,329, reflecting a likely peak of new HIV cases in 1982 (Figure 1.1). There was a slight increase in the number of new AIDS cases between 2002 and 2003, which is consistent with the increase observed in the nation during that time. Delays in reporting affect the number of cases for recent years particularly for 2004. Deaths among persons with AIDS reached a plateau between 1992 and 1994, and declined thereafter. The sharpest decline in AIDS deaths occurred between 1995 and 1997, reflecting the impact of highly active antiretroviral therapies. By the end of 2004, there were 8,500 San Franciscans living with AIDS. Of note, mortality data for 2003 and 2004 are not yet complete.

Figure 1.1 AIDS cases, deaths, and prevalence, San Francisco, 1980-2004



HIV non-AIDS case reporting data

The reporting of HIV (non-AIDS) cases was implemented in California July 1, 2002. Persons with HIV who have not developed AIDS are reported using a non-name code. Anonymous testing sites, blood banks, and certain research studies are exempt from reporting. The HIV reporting system is a dual reporting system which requires both the health care provider to report their HIV-infected patients, and the laboratory to report tests indicative of HIV infection, including HIV antibody tests and all viral load test results. More detailed information regarding the HIV reporting regulations can be found at the California Department of Health Services website: www.dhs.ca.gov/AIDS/HIVreporting.

The HIV reporting data are not complete and have not been fully evaluated for accuracy. It is estimated that an additional 2,000-3,000 persons diagnosed with HIV in San Francisco have not yet been reported. Data presented here reflect persons diagnosed and reported with HIV among San Francisco residents.

Between July 2002 and March 2005, a total of 5,591 HIV (non-AIDS) cases among San Francisco residents had been reported. The majority (74%) of these cases were known to be diagnosed prior to the implementation of HIV reporting (Table 1.3). Ninety-one percent were male, 7% were female and 2% were transgender. Whites accounted for the largest proportion (64%) of HIV cases followed by African Americans (15%) and Latinos (13%). Asian/Pacific Islanders and Native Americans made up a relatively small proportion of HIV cases. The predominant risk category among HIV cases was MSM (72%). Seven percent of the HIV cases were reported without risk information.

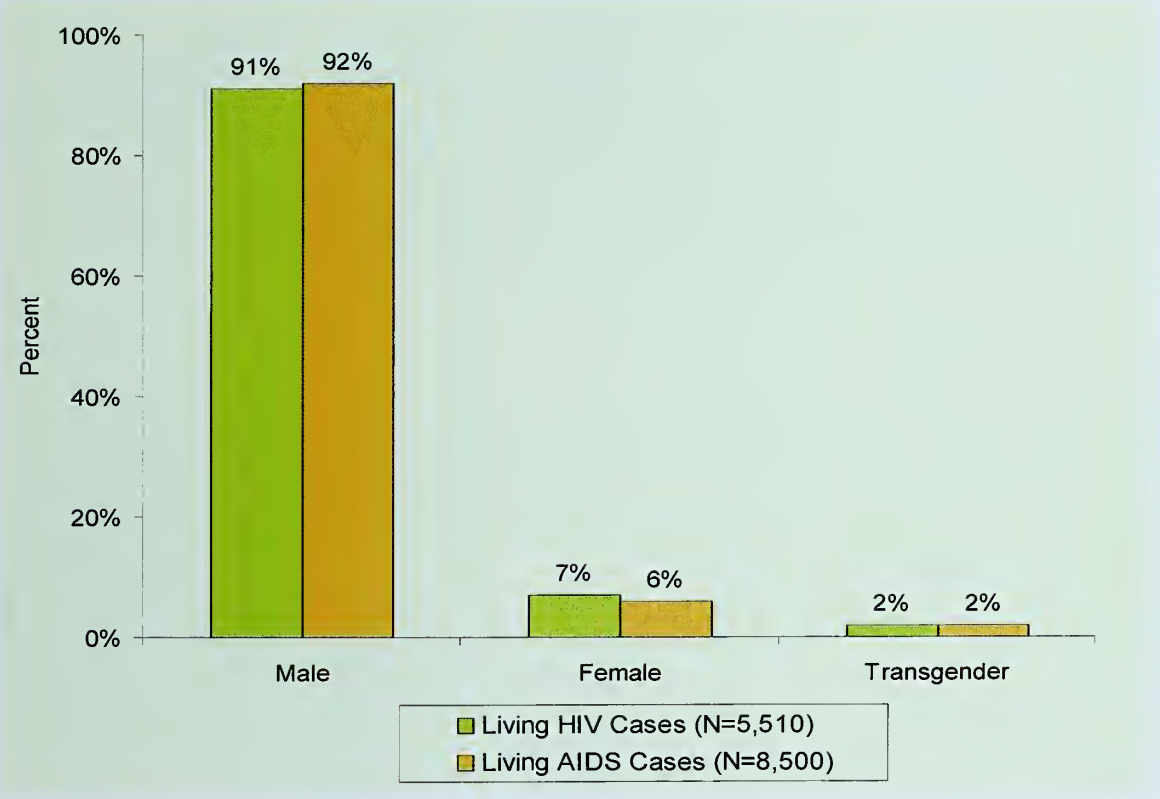
Table 1.3 Characteristics of persons reported with HIV non-AIDS, San Francisco, July 2002 - March 2005

	Number	Percent
Total	**5,591**	**100%**
Diagnosis Date*		
Diagnosed before July 1, 2002	4,111	74%
Diagnosed after July 1, 2002	1,480	26%
Gender		
Male	5,112	91%
Female	373	7%
Transgender	106	2%
Race/ethnicity		
White	3,603	64%
African American	837	15%
Latino	719	13%
Asian/Pacific Islander	239	4%
Native American	49	1%
Other/Unknown	144	3%
Exposure Category		
MSM	4,009	72%
IDU	508	9%
MSM IDU	552	10%
Heterosexual	128	2%
Other	22	<1%
No Reported Risk	372	7%

* HIV diagnosis date is based on the earliest date of antibody test, patient self report of HIV infection, CD4, viral load test, or use of antiretroviral therapy.

Figures 1.2-1.6 compare demographic and risk characteristics among persons reported with HIV to those reported with AIDS. In general, the characteristics of persons living with HIV and AIDS are similar; the majority are male, white, and men who have sex with men.

Figure 1.2 Living HIV and AIDS cases by gender, San Francisco, December 2004



While whites accounted for the majority of men living with HIV and AIDS, there was a greater proportion of persons of color among women living with HIV and AIDS (Figures 1.3-1.4). Nearly half (46%) of women with HIV/AIDS were African American.

Figure 1.3 Living male HIV and AIDS cases by race/ethnicity, San Francisco, December 2004

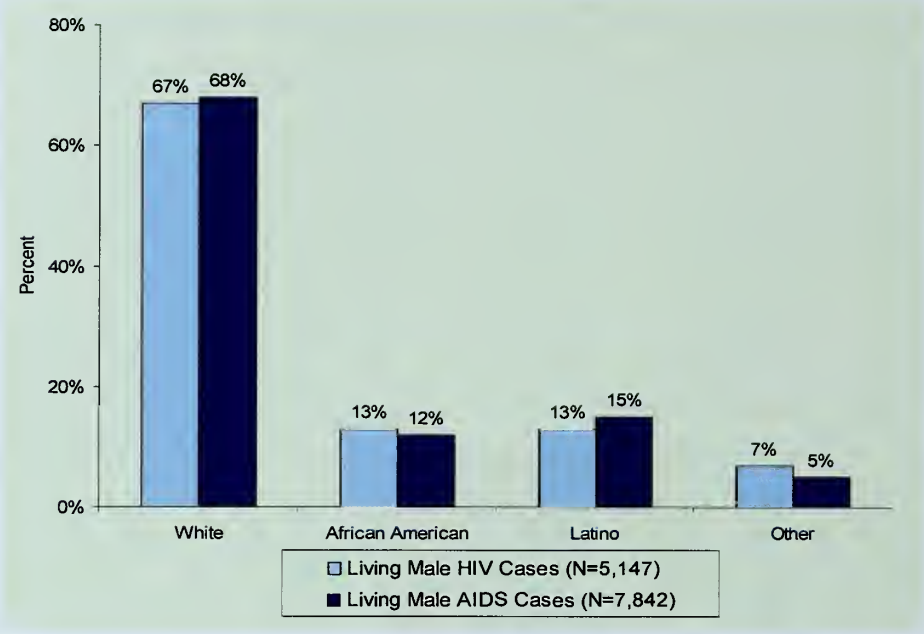
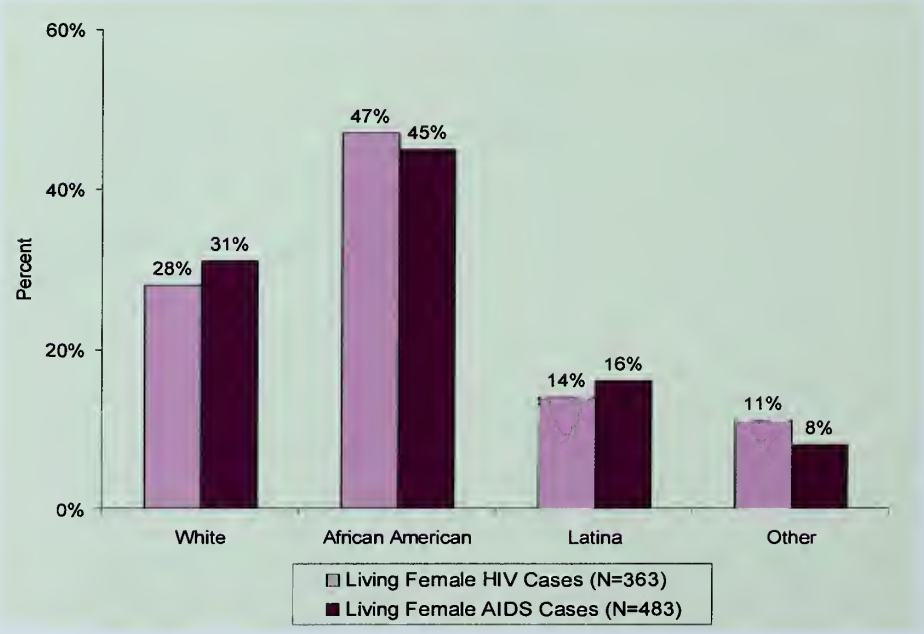
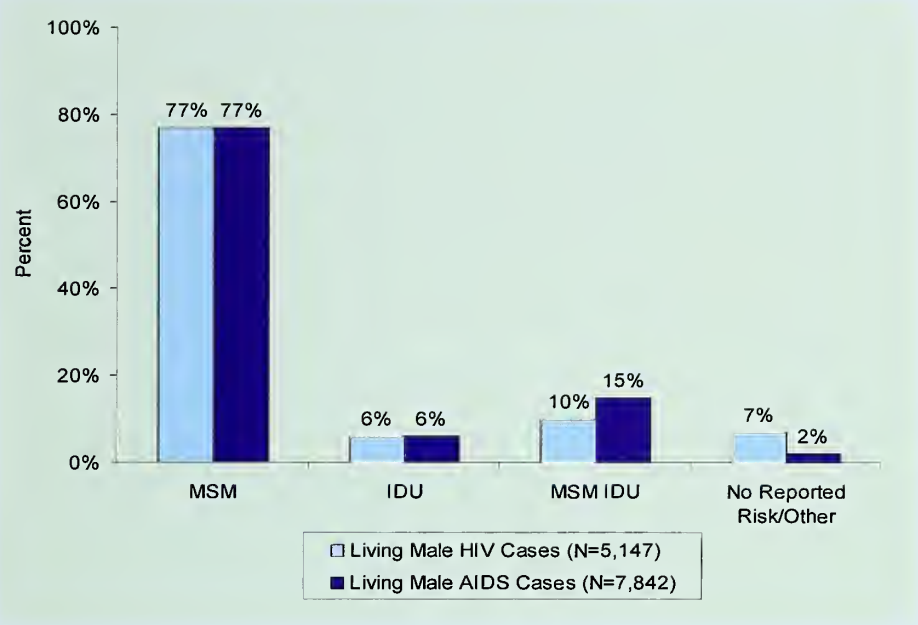


Figure 1.4 Living female HIV and AIDS cases by race/ethnicity, San Francisco, December 2004



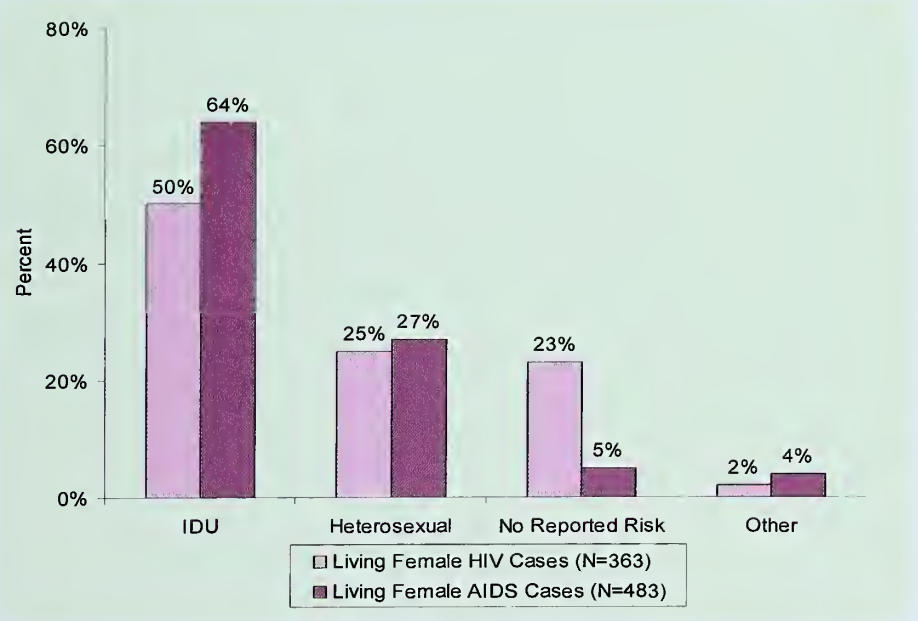
Seventy-seven percent of men with HIV/AIDS were men who have sex with men (Figure 1.5). An additional 10% of men with HIV and 15% of men with AIDS were men who had sex with men and also injected drugs. Six percent of men with HIV/AIDS were heterosexual injection drug users.

Figure 1.5 Living male HIV and AIDS cases by exposure category, San Francisco, December 2004



Among women with HIV/AIDS, the major risk category was injection drug use, followed by heterosexual contact (Figure 1.6). Twenty-three percent of women with HIV were reported without a risk compared to only 5% of women with AIDS.

Figure 1.6 Living female HIV and AIDS cases by exposure category, San Francisco, December 2004

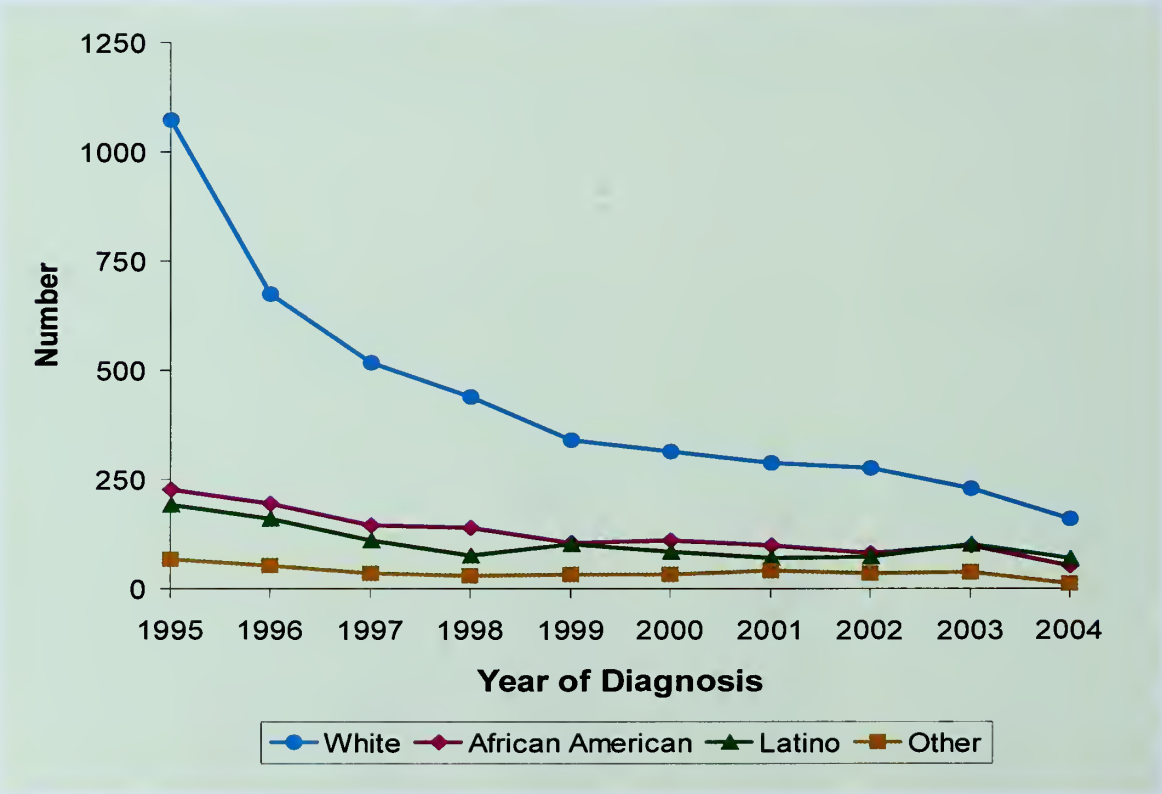


2 Trends in AIDS Incidence

Race/ethnicity

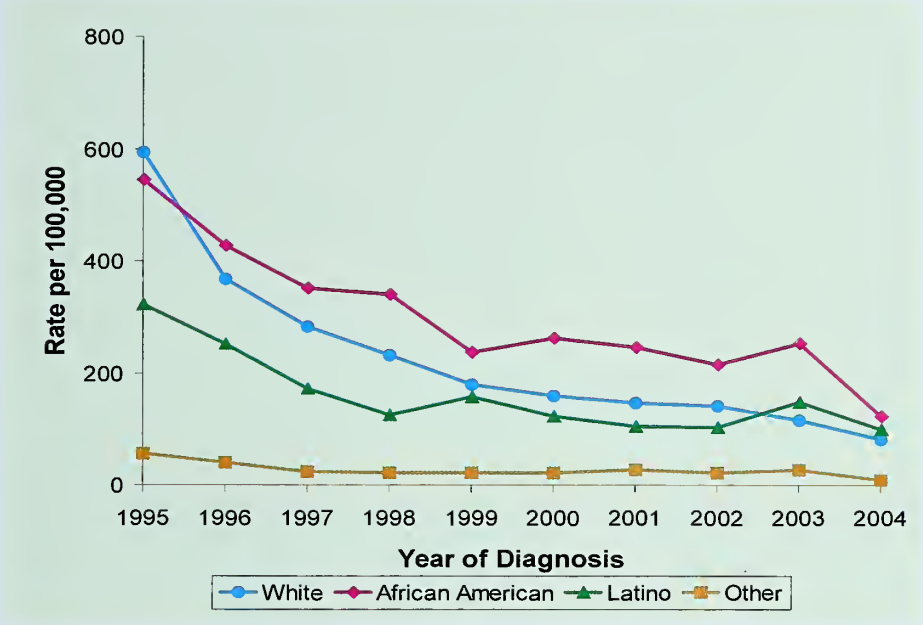
In absolute numbers, AIDS cases in San Francisco have occurred predominantly among whites (Figure 2.1). In general, the number of AIDS cases has declined over the last 10 years. Moreover, there was an increase in cases among people of color between 2002 and 2003. Of note, delays in reporting affect the numbers of cases for recent years, particularly for 2004.

Figure 2.1 Number of AIDS cases by race/ethnicity, San Francisco, 1995-2004



In 1996, the incidence rate of AIDS among African American men exceeded that of white men and this difference has persisted through 2004. The incidence rate for Latino men exceeded that of white men in 2003. The incidence rate increased between 2002 and 2003 among men of color. In 2004, the incidence rate of AIDS per 100,000 population was 123 among African American men, 99 among Latino men, and 81 among white men (Figure 2.2).

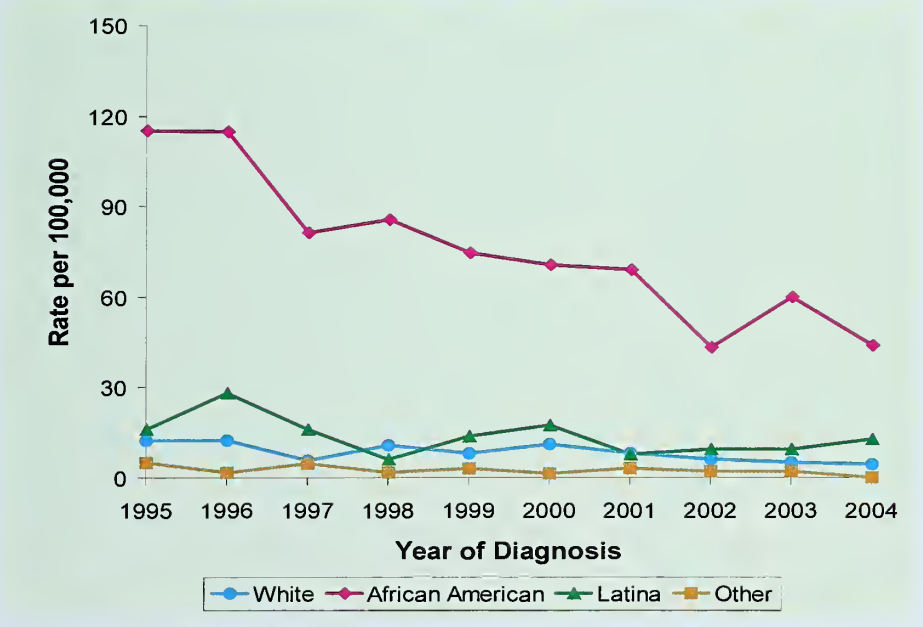
Figure 2.2 Male annual AIDS incidence rates* per 100,000 population by race/ethnicity, San Francisco, 1995-2004



* See Technical Notes "AIDS Incidence Rates".

The incidence rate of AIDS among women is considerably lower than that among men. African American women have been disproportionately affected by AIDS throughout the epidemic compared to women of other race/ethnicities. Although the incidence rate among African American women had declined from 69 per 100,000 in 2001 to 44 per 100,000 in 2004, it remained substantially higher than the rates among women of other races and ethnicities (Figure 2.3).

Figure 2.3 Female annual AIDS incidence rates* per 100,000 population by race/ethnicity, San Francisco, 1995-2004

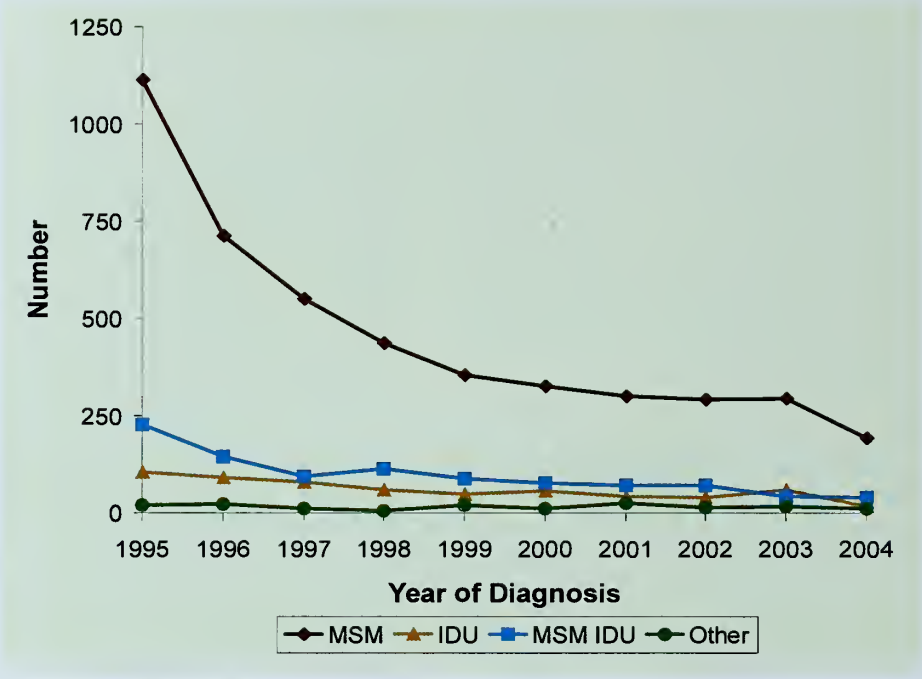


* See Technical Notes "AIDS Incidence Rates".

Exposure category

The majority of male AIDS cases have occurred among MSM (Figure 2.4). The number of MSM and MSM IDU AIDS cases has continued to decline through 2004. The number of male heterosexual IDU AIDS cases increased from 39 to 60 between 2002 and 2003 and then decreased to 17 in 2004. In 2004, 74% of male AIDS cases were MSM, 15% were MSM IDU, and 7% were heterosexual IDU.

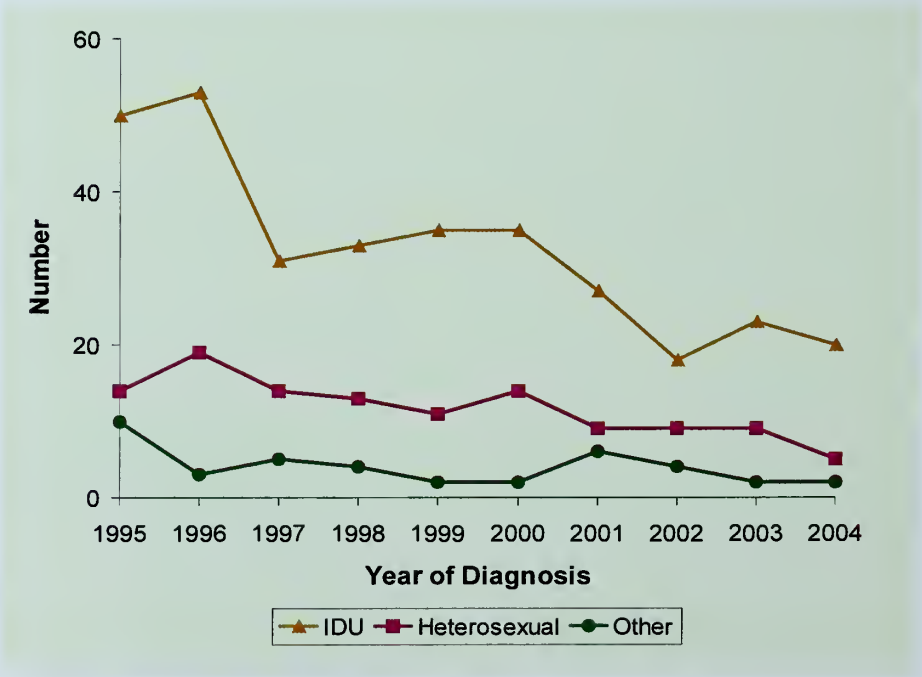
Figure 2.4 Number of male AIDS cases* by exposure category, San Francisco, 1995-2004



* Excludes male-to-female transgender AIDS cases.

The predominant exposure category of AIDS cases among women is injection drug use, followed by heterosexual transmission (Figure 2.5). In general, the number of AIDS cases among women attributed to injection drug use has declined, with a small increase between 2002 and 2004. In 2004, 74% of female AIDS cases were IDU and 19% were heterosexual.

Figure 2.5 Number of female AIDS cases* by exposure category, San Francisco, 1995-2004



* Excludes female-to-male transgender AIDS cases.

Age

The largest number of men, women and transgender persons with AIDS were diagnosed between ages 30 and 39 years (Table 2.1). Younger persons (less than 30 years old) made up a larger proportion of female and transgender AIDS cases than male AIDS cases. There was an increase in the percentage of persons diagnosed with AIDS in the older age groups (over 50 years) in recent years. This likely reflects the use of more effective therapies which have extended the time from acquiring HIV infection to the development of AIDS.

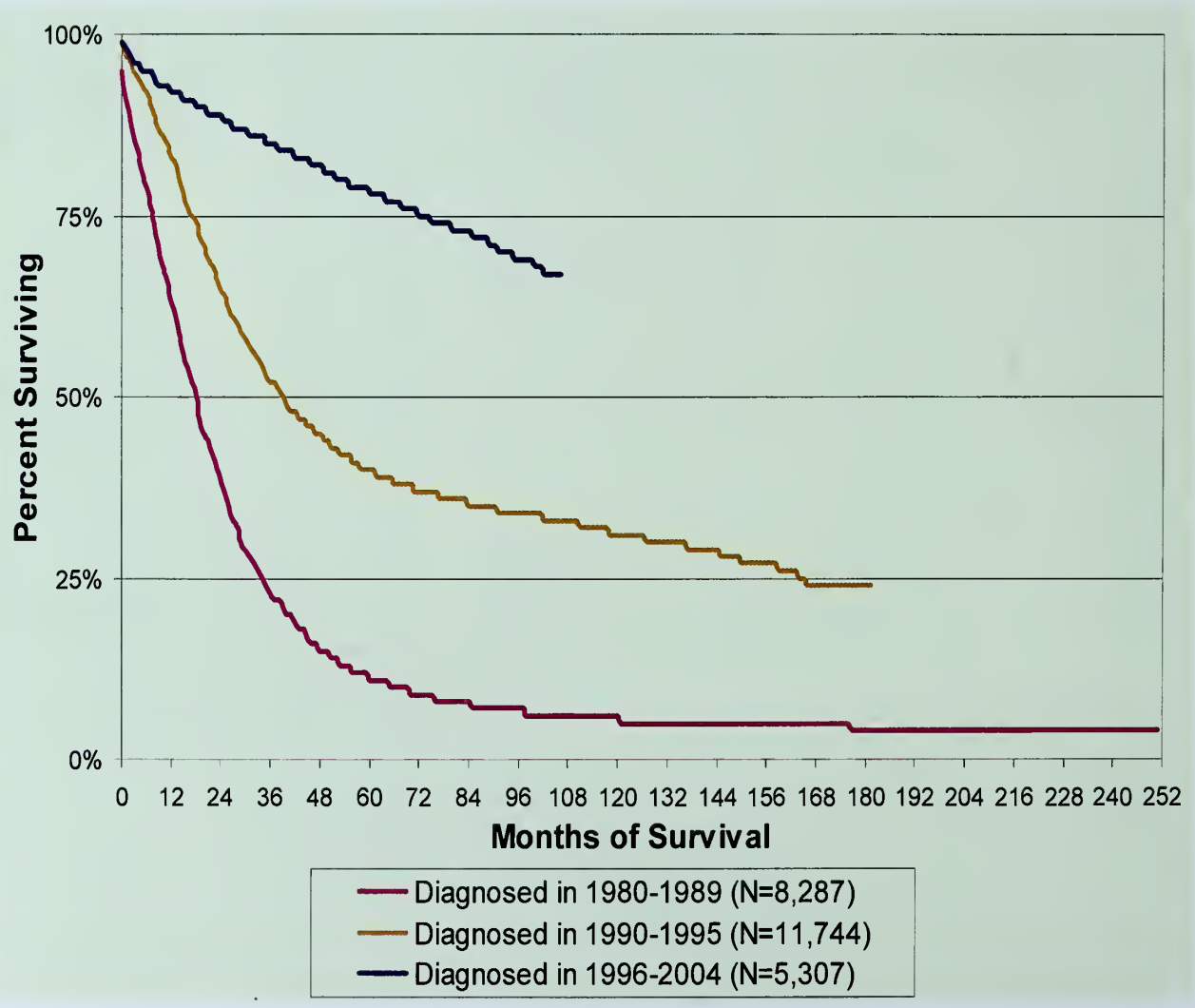
Table 2.1 AIDS cases by gender and age at diagnosis, diagnosed 1994-2004, San Francisco

	1994-1996		1997-2000		2001-2004		Cumulative Totals	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Male								
0 - 19	6	(<1)	3	(<1)	4	(<1)	44	(<1)
20 - 29	415	(10)	225	(10)	118	(8)	2,797	(11)
30 - 39	1,852	(45)	1010	(43)	582	(35)	11,339	(46)
40 - 49	1,354	(33)	771	(33)	537	(35)	7,740	(31)
50+	483	(12)	335	(14)	289	(19)	2,859	(12)
Male Subtotal	**4,110**	**(100)**	**2,344**	**(100)**	**1,530**	**(100)**	**24,779**	**(100)**
Female								
0 - 19	4	(2)	4	(2)	2	(1)	24	(2)
20 - 29	31	(13)	23	(12)	22	(16)	147	(15)
30 - 39	96	(40)	72	(36)	43	(32)	401	(40)
40 - 49	83	(35)	74	(37)	43	(32)	297	(29)
50+	25	(10)	26	(13)	24	(18)	141	(14)
Female Subtotal	**239**	**(100)**	**199**	**(100)**	**134**	**(100)**	**1,010**	**(100)**
Transgender								
13 - 29	16	(20)	18	(25)	6	(10)	79	(25)
30 - 39	42	(53)	28	(38)	28	(47)	145	(45)
40+	21	(27)	27	(37)	26	(43)	97	(30)
Transgender Subtotal	**79**	**(100)**	**73**	**(100)**	**60**	**(100)**	**321**	**(100)**

3 Survival among Persons with AIDS

These Kaplan-Meier curves demonstrate the improved survival for San Francisco residents diagnosed with AIDS in three time periods (Figure 3.1). Survival was poor for persons diagnosed early in the AIDS epidemic (1980-1989) (median survival of 18 months). However, survival has improved since then and for persons diagnosed between 1990 and 1995 the median survival was over three years (39 months). Approximately 70% of persons diagnosed with AIDS between 1996 and 2004 are still living. Improvements in survival among persons diagnosed with AIDS after 1995 are attributable to more effective antiretroviral therapies.

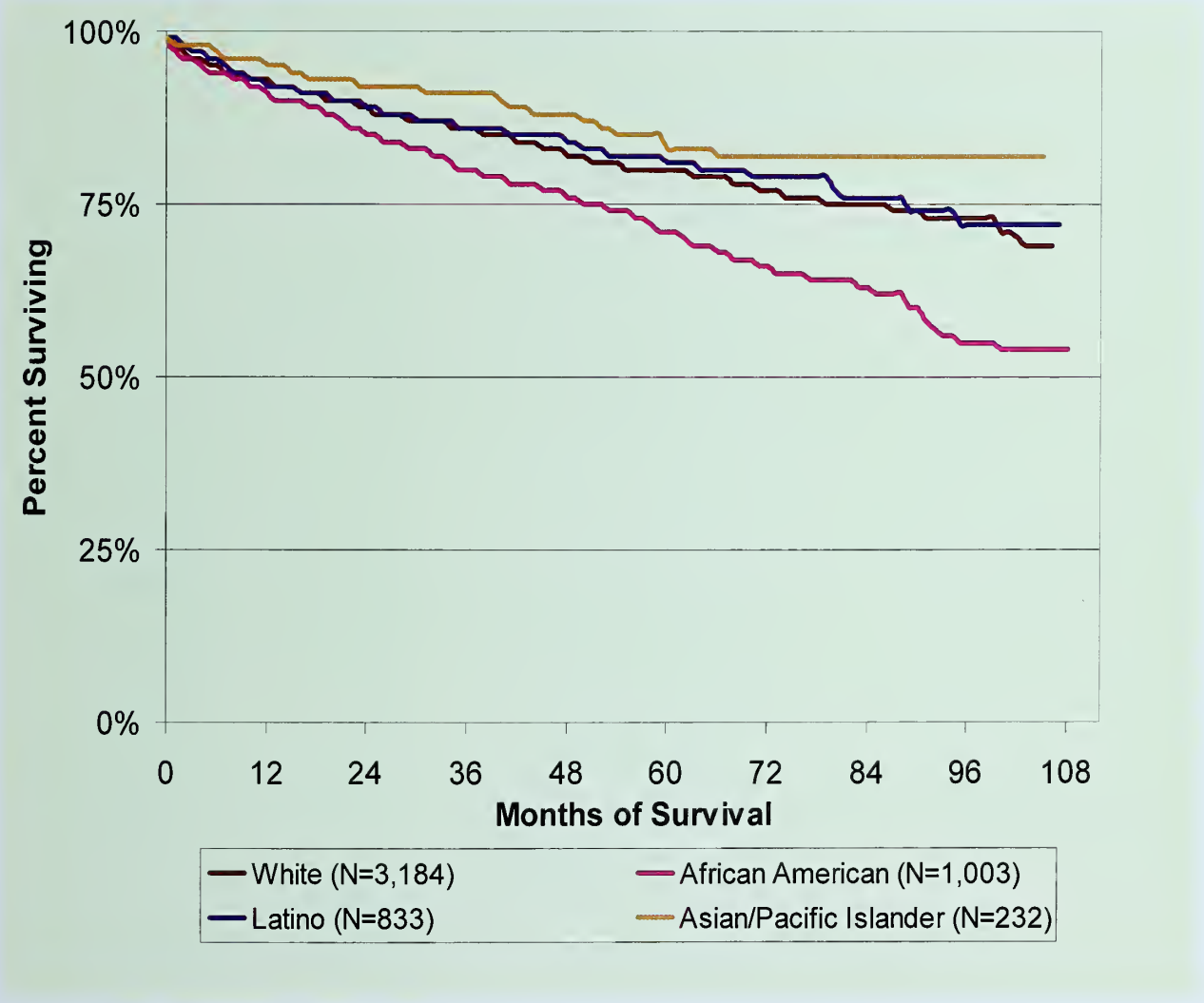
Figure 3.1 Kaplan-Meier survival* curves for persons diagnosed with AIDS in 1980-1989, 1990-1995, and 1996-2004, San Francisco



* See Technical Notes "AIDS Survival."

Although survival after AIDS diagnosis has improved in recent years for all racial and ethnic groups, relatively worse survival among African Americans has persisted (Figure 3.2). Among persons diagnosed between 1996 and 2004, the percent of African Americans surviving 60 months (five years) was 71%, compared to 80% of whites, 81% of Latinos, and 83% of Asians/Pacific Islanders. Although the survival differences are due in part to lower use of highly active antiretroviral therapies, the reasons for these differences are not entirely understood.

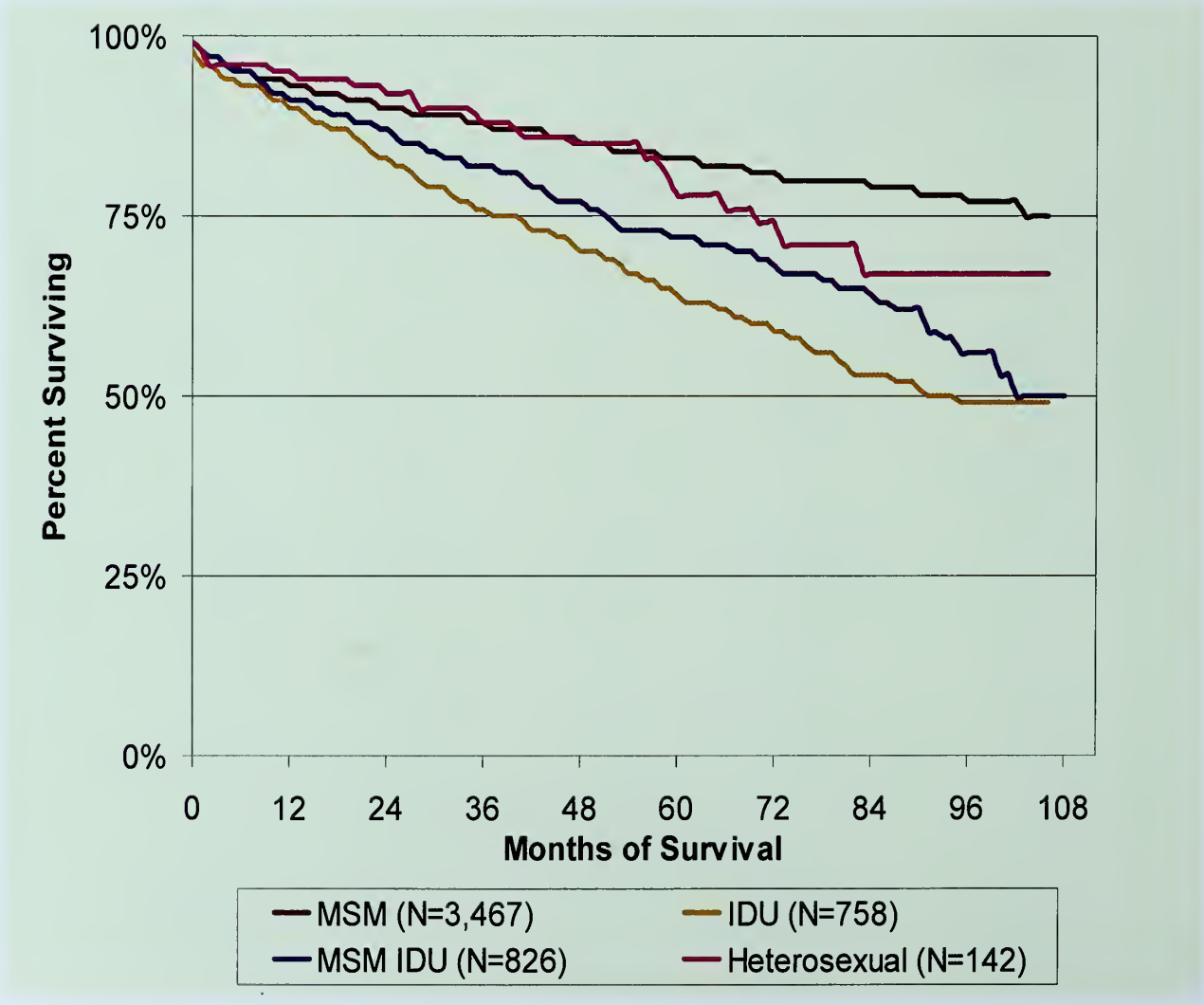
Figure 3.2 Kaplan-Meier survival* curves for persons diagnosed with AIDS between 1996 and 2004 by race/ethnicity, San Francisco



* See Technical Notes "AIDS Survival."

Survival after AIDS diagnosis has been better for MSM and heterosexuals compared to MSM IDU and heterosexual IDU (Figure 3.3). Eighty-three percent of MSM and 78% of heterosexuals survived 60 months (five years) after their AIDS diagnosis, compared to only 72% of MSM IDU and 64% of other IDU. Worse survival among IDU partly reflects higher death rates from causes associated with drug use such as overdose, liver disease, and other infections.

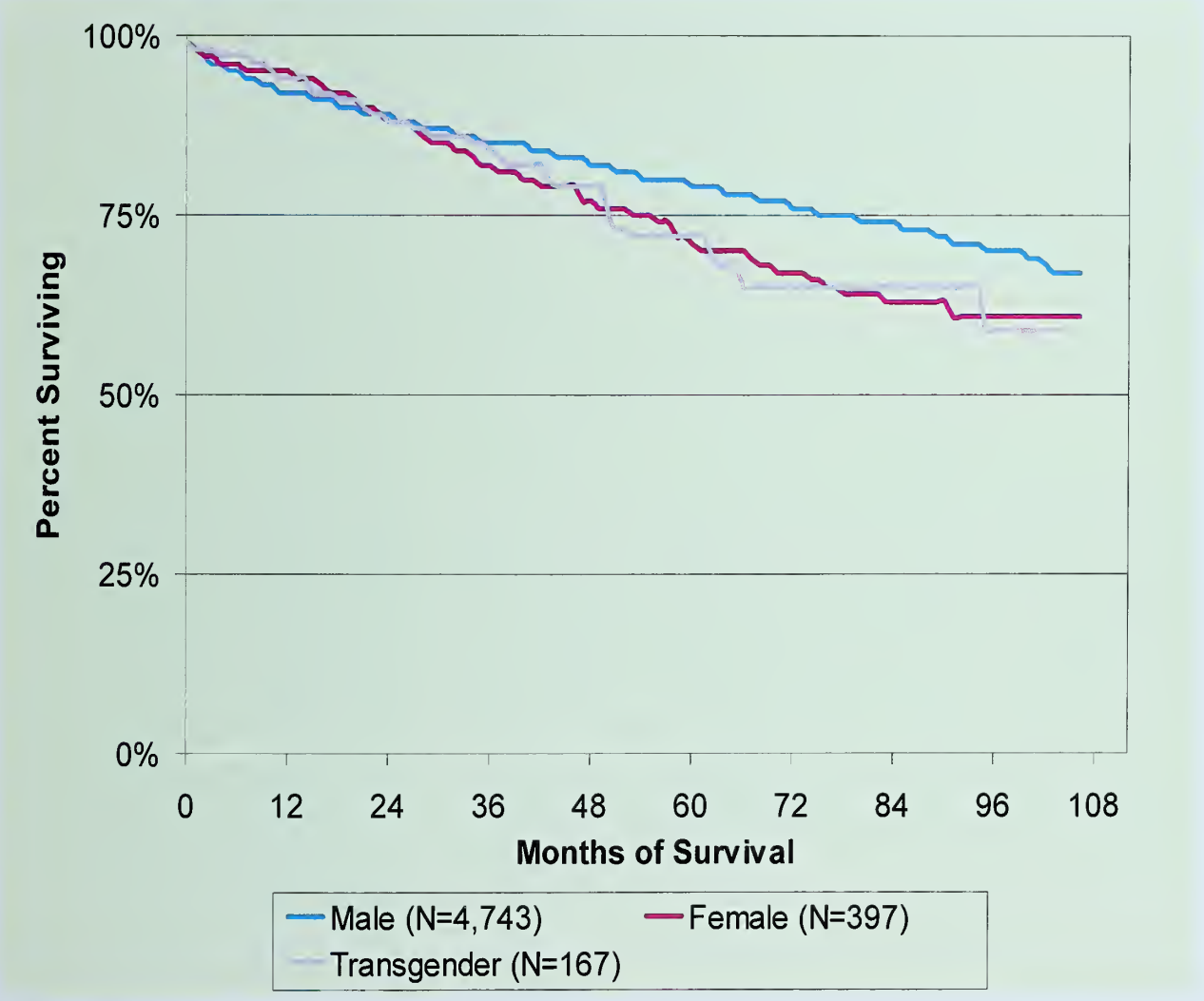
Figure 3.3 Kaplan-Meier survival* curves for persons diagnosed with AIDS between 1996 and 2004 by exposure category, San Francisco



* See Technical Notes "AIDS Survival."

Seventy-nine percent of men, 71% of women, and 72% of transgenders survived 60 months (five years) after AIDS diagnosis (Figure 3.4). These differences are consistent with lower use of HAART among women and transgenders compared to men.

Figure 3.4 Kaplan-Meier survival* curves for persons diagnosed with AIDS between 1996 and 2004 by gender, San Francisco



* See Technical Notes "AIDS Survival."

4 Trends in AIDS Mortality

A total of 17,610 deaths have occurred among San Francisco AIDS cases as of December 31, 2004 (Table 4.1). The number of AIDS deaths declined between 2001 and 2004; however, reporting of deaths in recent years is not yet complete.

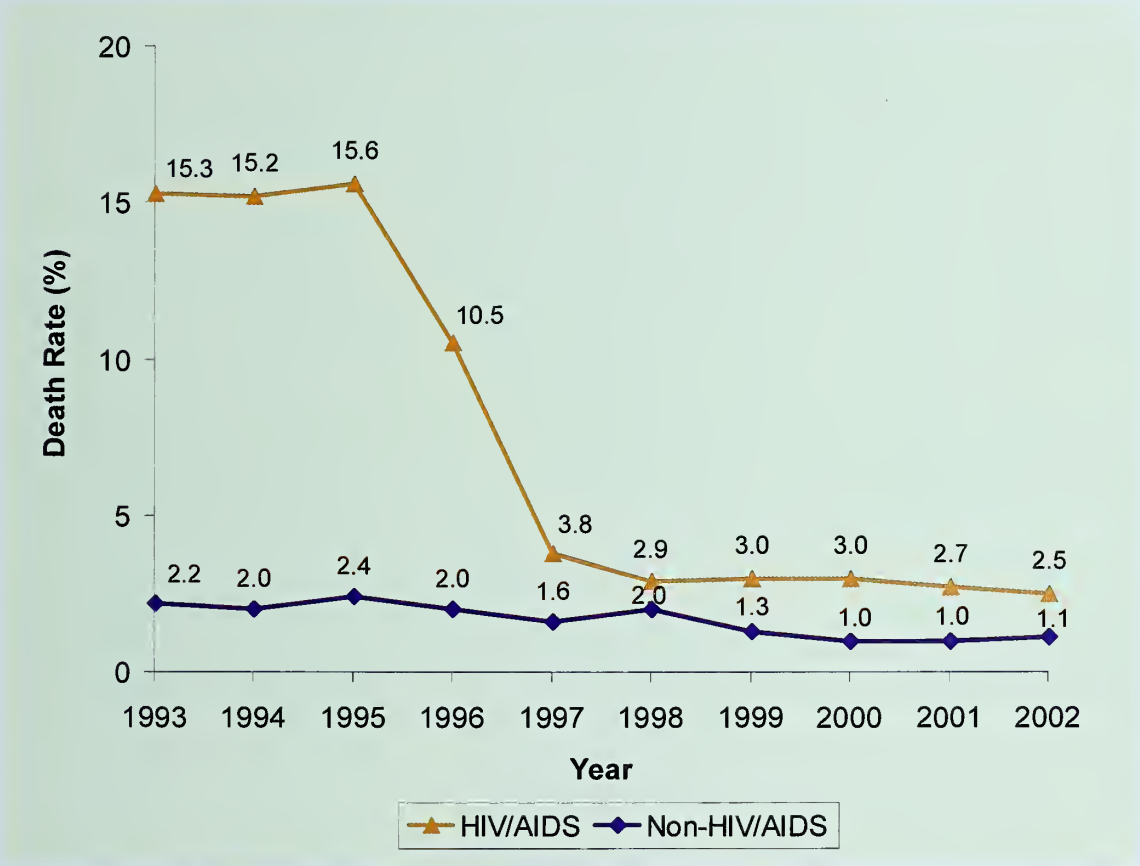
Table 4.1 Deaths in persons with AIDS, by gender, race/ethnicity, and exposure category, San Francisco, 2001-2004

	Year of Death								Cumulative Totals as of 12/31/2004
	2001		2002		2003*		2004*		
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	
Gender									
Male	278	(87)	273	(88)	189	(88)	183	(90)	16,937
Female	26	(8)	29	(9)	20	(9)	13	(6)	527
Transgender	15	(5)	9	(3)	6	(4)	7	(3)	146
Race/Ethnicity									
White	202	(63)	190	(61)	129	(60)	117	(58)	13,330
African American	71	(22)	73	(23)	52	(24)	44	(22)	2,053
Latino	39	(12)	40	(13)	25	(12)	27	(13)	1,714
Other	7	(2)	8	(3)	9	(4)	15	(7)	513
Exposure Category									
MSM	181	(57)	173	(56)	105	(49)	103	(51)	13,478
IDU	60	(19)	60	(19)	47	(22)	38	(19)	1,150
MSM IDU	65	(20)	64	(21)	55	(26)	48	(24)	2,580
Heterosexual	8	(3)	9	(3)	5	(2)	6	(3)	155
Other/Unknown	5	(2)	5	(2)	3	(1)	8	(4)	247
Total	**319**	**(100)**	**311**	**(100)**	**215**	**(100)**	**203**	**(100)**	**17,610**

* Data are incomplete due to reporting delay. In addition, deaths that occurred outside of San Francisco are primarily identified through matches with the National Death Index (NDI) which are complete only through 2002.

The trend in death rates in persons with AIDS was examined by their single, underlying cause of death. The death rate due to HIV/AIDS-related causes plateaued between 1993 and 1995, and then decreased from 15.6 per 100 persons with AIDS in 1995 to 2.5 per 100 persons with AIDS in 2002 (Figure 4.1). The death rate due to non-HIV/AIDS-related causes has declined slightly in recent years; in 1993, the rate of non-HIV/AIDS-related causes was 2.2 per 100 persons with AIDS and was 1.1 per 100 persons with AIDS in 2002.

Figure 4.1 Death rates* due to HIV/AIDS-related and non-HIV/AIDS-related causes among persons with AIDS, San Francisco, 1993-2002



* Death rates are calculated as the number of persons with AIDS who died each year divided by the number of total AIDS cases for that year. See Technical Notes for "Causes of Death."

The proportion of deaths in which HIV/AIDS was listed as the underlying cause of death decreased from 87% of AIDS deaths occurring between 1993 and 1995 to 72% in 1999-2002 (Table 4.2). Other frequently cited underlying causes of death in 1999-2002 include non-AIDS cancer (6.3%), heart disease (4.6%), drug overdose (2.6%), and liver disease (2.5%). The proportion of persons with AIDS who died of these non-HIV/AIDS-related conditions increased over time. Although infrequent, cardiomyopathy was listed as a cause of death in 0.7% of deaths in 1999-2002 compared to less than 0.3% of deaths in earlier years. This may reflect an increase in deaths from HAART-related cardiomyopathy.

Table 4.2 Underlying causes of death among persons with AIDS, San Francisco, 1993-2002

	Year of Death					
	1993-1995 N= 4,240		1996-1998 N= 1,756		1999-2002 N=1,292	
Underlying Cause of Death*	No.	(%)	No.	(%)	No.	(%)
HIV/AIDS	3,703	(87.3)	1,324	(75.4)	925	(71.6)
Non-AIDS cancer	59	(1.4)	63	(3.6)	82	(6.3)
Lung cancer	19	(0.4)	14	(0.8)	25	(1.9)
Liver cancer	3	(0.1)	9	(0.5)	16	(1.2)
Anal cancer	0	(0.0)	3	(0.2)	7	(0.5)
Heart disease	48	(1.1)	41	(2.3)	60	(4.6)
Coronary heart disease	15	(0.4)	16	(0.9)	38	(2.9)
Cardiomyopathy	3	(0.1)	5	(0.3)	9	(0.7)
Drug overdose	33	(0.8)	40	(2.3)	33	(2.6)
Liver disease	40	(0.9)	19	(1.1)	32	(2.5)
Alcoholic liver disease	8	(0.2)	10	(0.6)	15	(1.2)
Liver cirrhosis	11	(0.3)	6	(0.3)	14	(1.1)
Suicide	41	(1.0)	21	(1.2)	23	(1.8)
Mental disorders	10	(0.2)	12	(0.7)	17	(1.3)
Chronic obstructive lung disease	16	(0.4)	10	(0.6)	13	(1.0)
Viral hepatitis	47	(1.1)	50	(2.8)	12	(0.9)

* See Technical Notes "Causes of Death."

Table 4.3 summarizes both underlying and contributory causes of death among persons with AIDS. Although persons with AIDS predominantly died of HIV/AIDS-related causes, the increasing proportion of deaths due to non-HIV/AIDS-related causes suggests that certain highly prevalent risk behaviors in this population are playing an important role in mortality trends. Co-infection with HIV and hepatitis viruses may be related to deaths associated with liver disease, viral hepatitis, and liver cancer. Smoking may be related to deaths associated with lung cancer, obstructive lung disease, and coronary heart disease. Use of illicit drugs contributes to deaths due to drug overdoses and mental disorders due to substance use.

Table 4.3 Multiple causes of death among persons with AIDS, San Francisco, 1993-2002

	Year of Death					
	1993-1995 N = 4,240		1996-1998 N = 1,756		1999-2002 N = 1,292	
Multiple Causes of Death*	**No.**	**(%)**	**No.**	**(%)**	**No.**	**(%)**
HIV/AIDS	4,050	(95.5)	1,584	(90.2)	1,100	(85.1)
Heart disease	670	(15.8)	280	(15.9)	252	(19.5)
Coronary heart disease	28	(0.7)	30	(1.7)	62	(4.8)
Cardiomyopathy	44	(1.0)	27	(1.5)	32	(2.5)
Pneumonia	690	(16.3)	252	(14.4)	200	(15.5)
Liver disease	221	(5.2)	142	(8.1)	204	(15.8)
Liver cirrhosis	55	(1.3)	52	(3.0)	77	(6.0)
Alcoholic liver disease	16	(0.4)	15	(0.9)	18	(1.4)
Viral hepatitis	84	(2.0)	88	(5.0)	161	(12.5)
Non-AIDS cancer	245	(5.8)	130	(7.4)	117	(9.1)
Lung cancer	20	(0.5)	17	(1.0)	27	(2.1)
Liver cancer	4	(0.1)	11	(0.6)	20	(1.5)
Anal cancer	1	(0.0)	5	(0.3)	9	(0.7)
Septicemia	268	(6.3)	127	(7.2)	122	(9.4)
Renal disease	146	(3.4)	91	(5.2)	104	(8.0)
Mental disorders due to substance use	42	(1.0)	52	(3.0)	70	(5.4)
Drug overdose	38	(0.9)	49	(2.8)	45	(3.5)
Chronic obstructive lung disease	45	(1.1)	36	(2.1)	42	(3.3)
Cerebrovascular disease	58	(1.4)	30	(1.7)	40	(3.1)
Aspergillosis	65	(1.5)	46	(2.6)	17	(1.3)
Suicide	41	(1.0)	21	(1.2)	23	(1.8)

* Includes underlying and contributory causes of death. Individuals may have more than one cause of death. See Technical Notes "Causes of Death."

5 Persons Living with AIDS

Although the annual number of new AIDS cases has generally decreased since 1992, ongoing incidence of AIDS, coupled with the increase in survival after AIDS, has resulted in an increasing number of persons living with AIDS. As of December 31, 2004, there were 8,500 San Francisco residents living with AIDS (Table 5.1). The demographic and risk characteristics of persons living with AIDS have remained relatively stable between 2001 and 2004; most are male, white, aged 40-49 years, and MSM (including MSM IDU). Of note, more than 80% of persons living with AIDS are 40 years and older and 36% are over 50 years old.

Table 5.1 Persons living with AIDS by demographic and risk characteristics, San Francisco, 2001-2004#

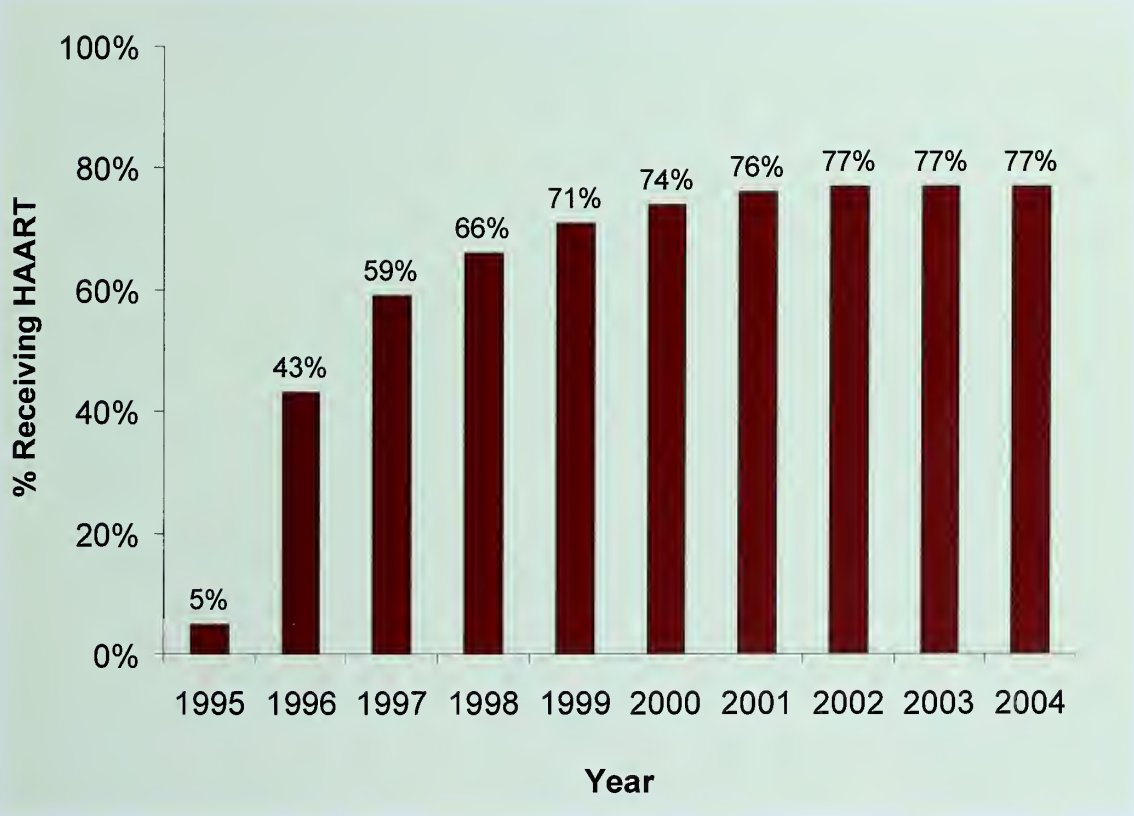
	2001		2002		2003		2004	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Gender								
Male	7,398	(92)	7,541	(92)	7,767	(92)	7,842	(92)
Female	453	(6)	455	(6)	469	(6)	483	(6)
Transgender	150	(2)	157	(2)	172	(2)	175	(2)
Race/Ethnicity								
White	5,385	(67)	5,471	(67)	5,572	(66)	5,616	(66)
African American	1,151	(14)	1,159	(14)	1,205	(14)	1,212	(14)
Latino	1,089	(14)	1,121	(14)	1,199	(14)	1,242	(15)
Asian/Pacific Islander	311	(4)	333	(4)	356	(4)	364	(4)
Native American	48	(1)	49	(1)	52	(1)	50	(1)
Other/Unknown	17	(<1)	20	(<1)	24	(<1)	16	(<1)
Age (at end of each year)								
0 - 19	18	(<1)	18	(<1)	17	(<1)	16	(<1)
20 - 29	184	(2)	162	(2)	145	(2)	127	(1)
30 - 39	2,133	(27)	1,926	(24)	1,759	(21)	1,514	(18)
40 - 49	3,553	(44)	3,654	(45)	3,763	(45)	3,785	(45)
50+	2,113	(26)	2,393	(29)	2,724	(32)	3,058	(36)
Risk								
MSM	5,794	(72)	5,925	(73)	6,125	(73)	6,218	(73)
IDU	780	(10)	777	(10)	813	(10)	812	(10)
MSM IDU	1,139	(14)	1,151	(14)	1,151	(14)	1,148	(14)
Heterosexual	155	(2)	160	(2)	168	(2)	173	(2)
Transfusion/Hemophilia	31	(<1)	30	(<1)	30	(<1)	29	(<1)
Other/Unknown	102	(1)	110	(1)	121	(1)	120	(1)
Total	**8,001**		**8,153**		**8,408**		**8,500**	

Persons living with AIDS at the end of each year.

6 Use of HAART among Persons with AIDS

Use of highly active antiretroviral therapies (HAART) was assessed among persons living with AIDS (i.e., not known to have died) including those who moved outside of San Francisco or were lost to follow up (see Technical Notes, Treatments). The proportion of persons living with AIDS who received HAART increased substantially from 5% in 1995 to 74% in 2000 (Figure 6.1). From 2001 to 2004, the proportion receiving HAART has been relatively stable. By the end of 2004, 77% of persons living with AIDS were noted to have received HAART.

Figure 6.1 Use of HAART among persons living with AIDS, San Francisco, 1995-2004



As of December 2004, a greater percent of men have used HAART than women or transgender persons (Figure 6.2). Use of HAART was higher among Asians/Pacific Islanders and whites compared to African Americans, Latinos, and Native Americans. HAART use was more common among MSM with AIDS than among heterosexual injection drug users.

Figure 6.2 Use of HAART among persons living with AIDS by gender, race/ethnicity, and exposure category, San Francisco, December 2004

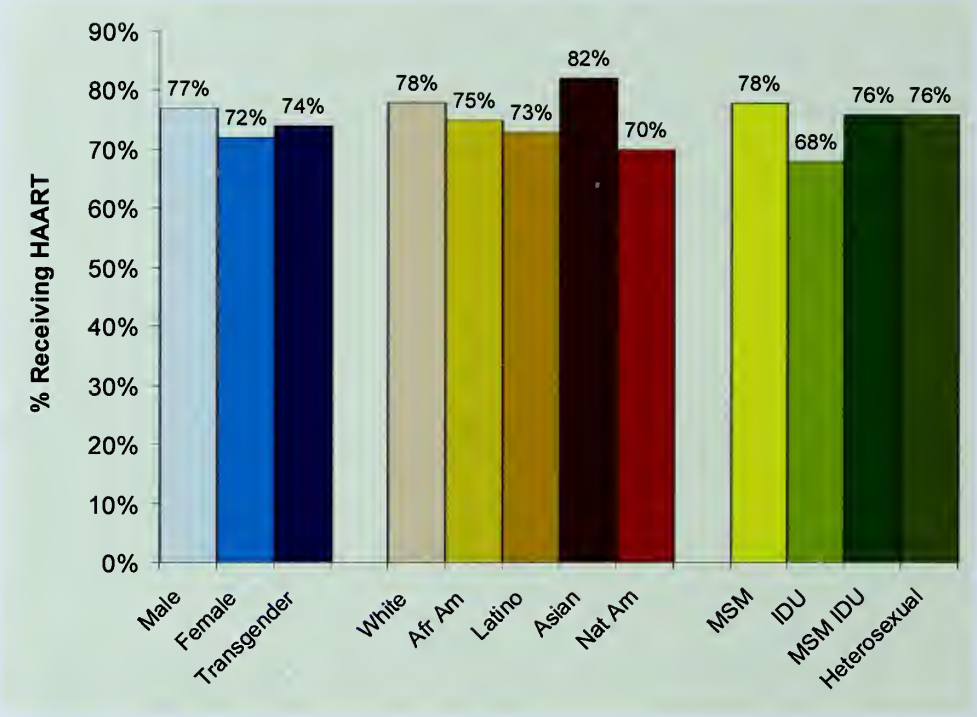
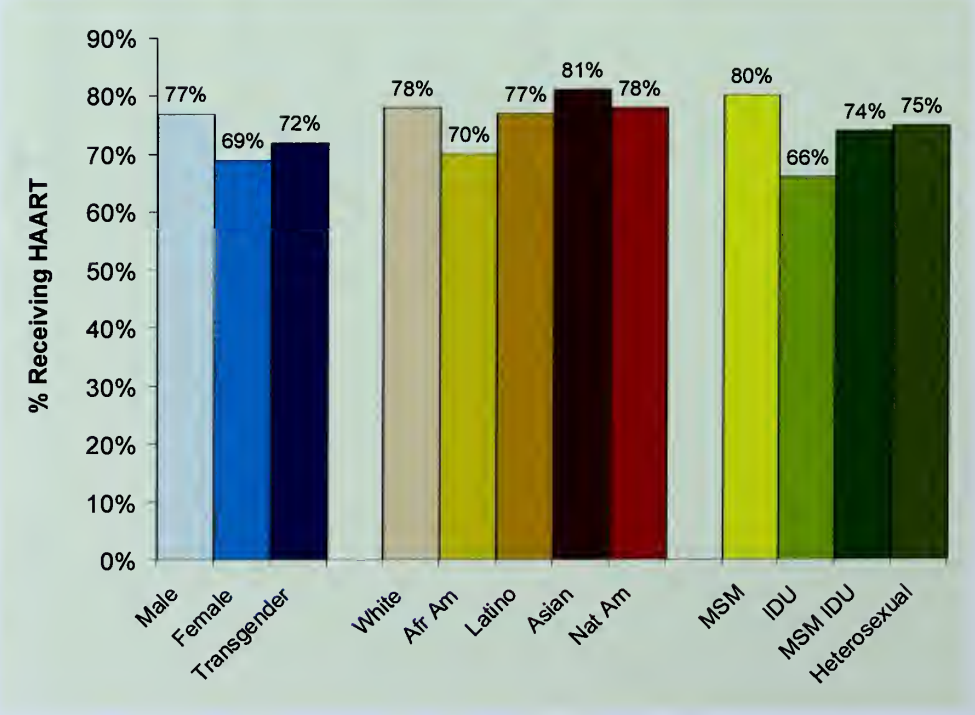


Figure 6.3 illustrates use of HAART by gender, race/ethnicity, and risk among persons diagnosed with AIDS between 1996 and 2004. Compared to persons living with AIDS as shown in Figure 6.2, those diagnosed in 1996-2004 appear to have more disparity in HAART use by gender, race/ethnicity, and risk groups.

Figure 6.3 Use of HAART among AIDS cases diagnosed between 1996 and 2004 by gender, race/ethnicity, and exposure category, San Francisco



7 Insurance Status and Facility of Diagnosis

Insurance status

Insurance status at the time of AIDS diagnosis differs by gender. Between 1999 and 2004, the proportion of men with private insurance increased while the proportion of women and transgender persons with private insurance at the time of AIDS diagnosis decreased (Figure 7.1). The proportion of uninsured women increased between 1999 and 2002 and decreased between 2002 and 2004. Fifty percent of transgender AIDS cases diagnosed in 2004 were uninsured. Among AIDS cases diagnosed between 1999 and 2004, 37% of men, 27% of women, and 57% of transgender persons lack health insurance at the time of AIDS diagnosis (Figure 7.2).

Figure 7.1 Trends in insurance status among persons with AIDS by gender, San Francisco, 1999-2004

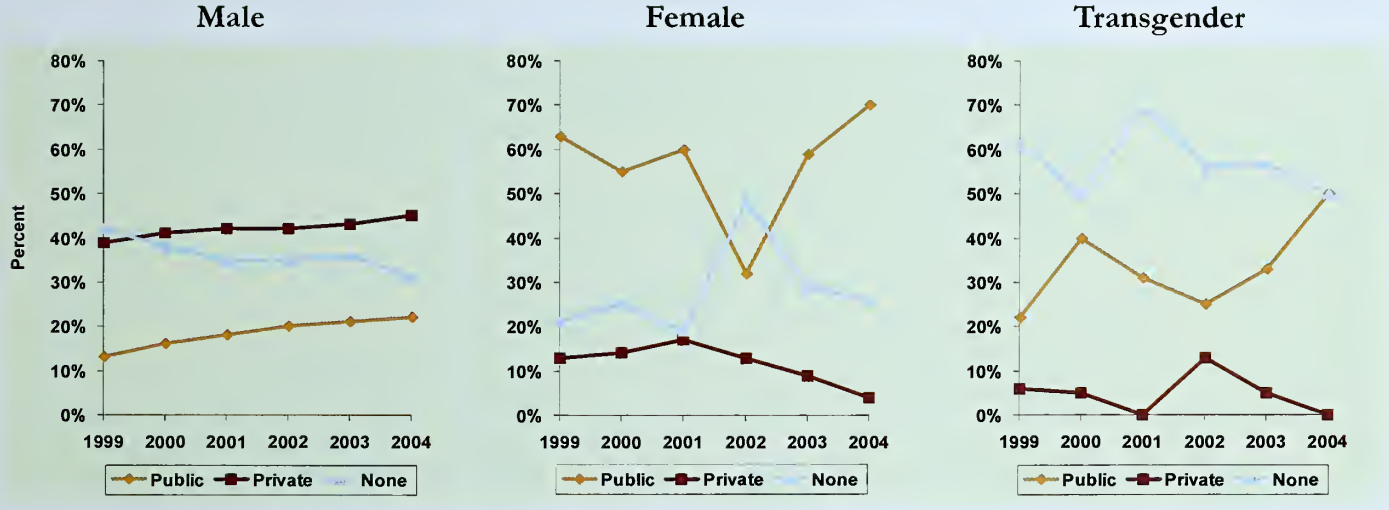
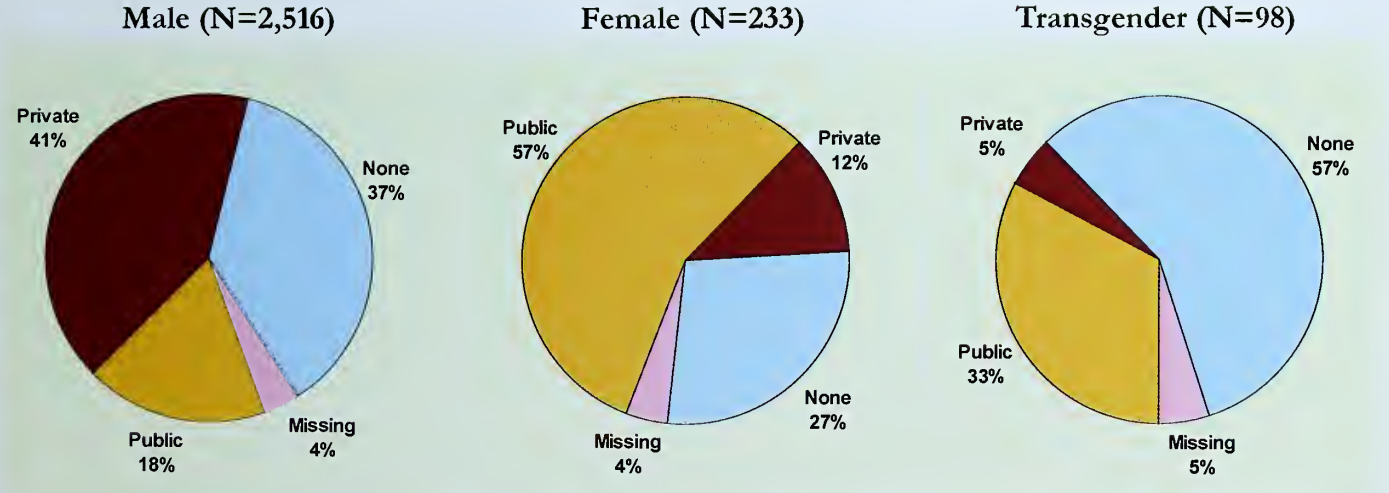


Figure 7.2 AIDS cases by gender and insurance status at diagnosis, San Francisco, 1999-2004



Type of facility

Among AIDS cases diagnosed between 1999 and 2004, 38% were diagnosed at public hospitals (including the San Francisco General Hospital, University of California at San Francisco Hospital, and the Veteran's Administration Hospital), 19% were diagnosed at community and public health clinics, 21% were diagnosed at private hospitals and 22% were diagnosed at private physician's offices. Compared to men with AIDS, women and transgender persons with AIDS were more likely to be diagnosed at public hospitals or clinics, and less likely to be diagnosed at private hospitals or physician's offices (Figure 7.3). African Americans with AIDS were more likely to be diagnosed at public hospitals and less likely to be diagnosed at private physician's offices than persons of other race/ethnicities (Figure 7.4).

Figure 7.3 AIDS cases by gender and type of diagnosing facility, San Francisco, 1999-2004

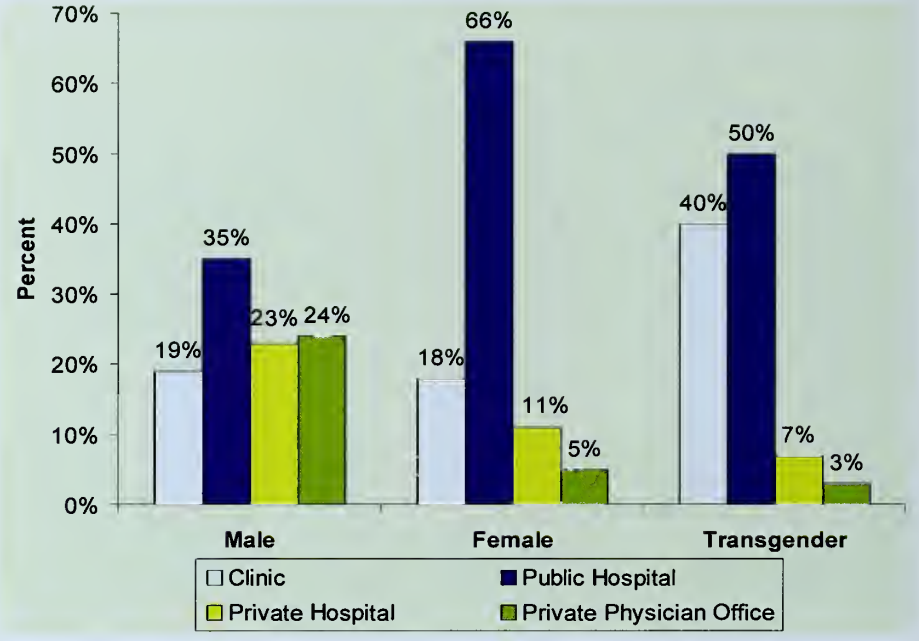
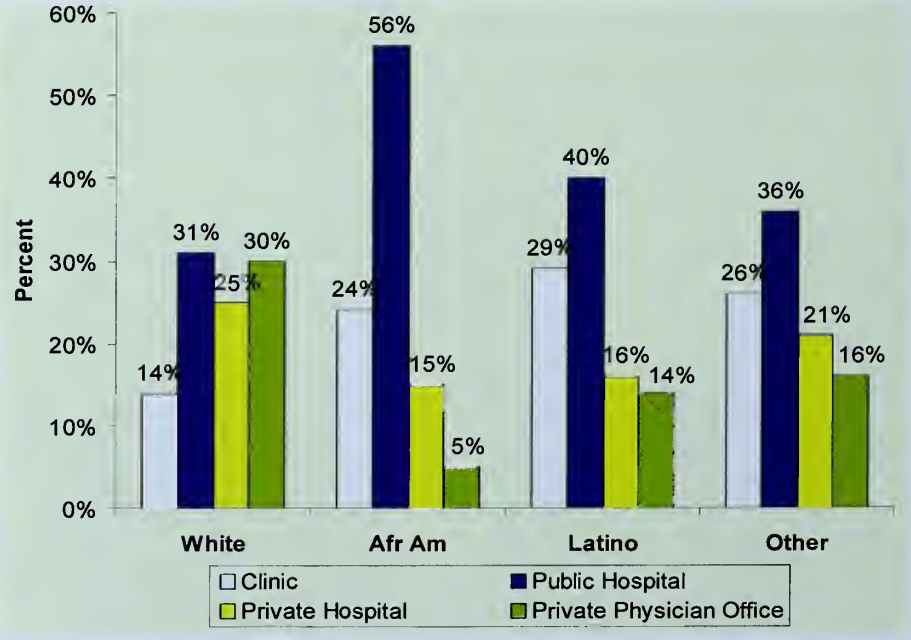


Figure 7.4 AIDS cases by race/ethnicity and type of diagnosing facility, San Francisco, 1999-2004

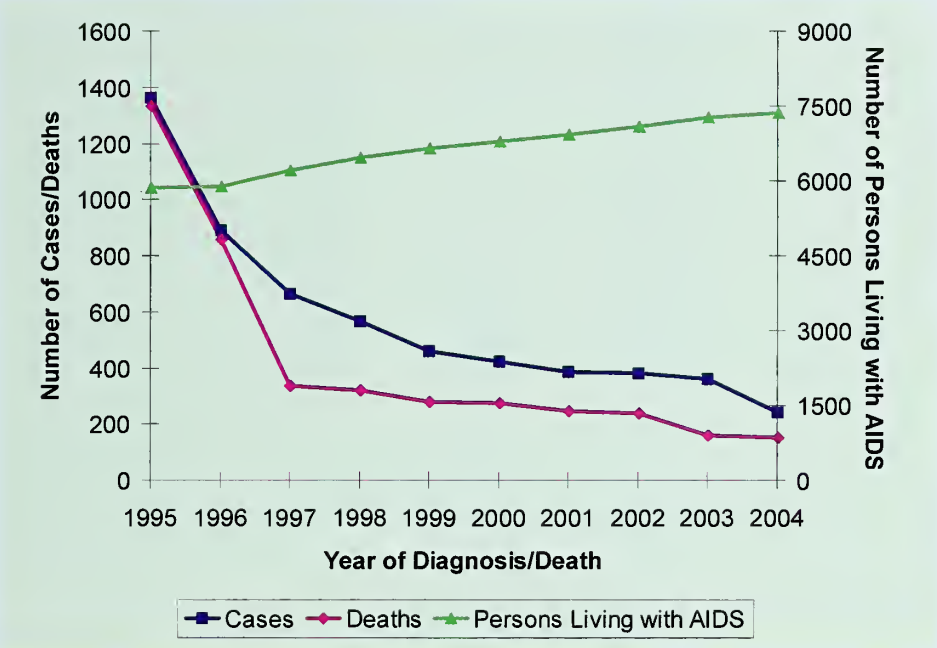


8 HIV/AIDS among Men Who Have Sex with Men

AIDS surveillance data

While the number of new AIDS cases and AIDS deaths among MSM has continued to decline, the number of MSM living with AIDS continues to increase (Figure 8.1). This is due in part to improved treatment for persons with AIDS. In 2004, there were 7,366 MSM living with AIDS among San Francisco residents.

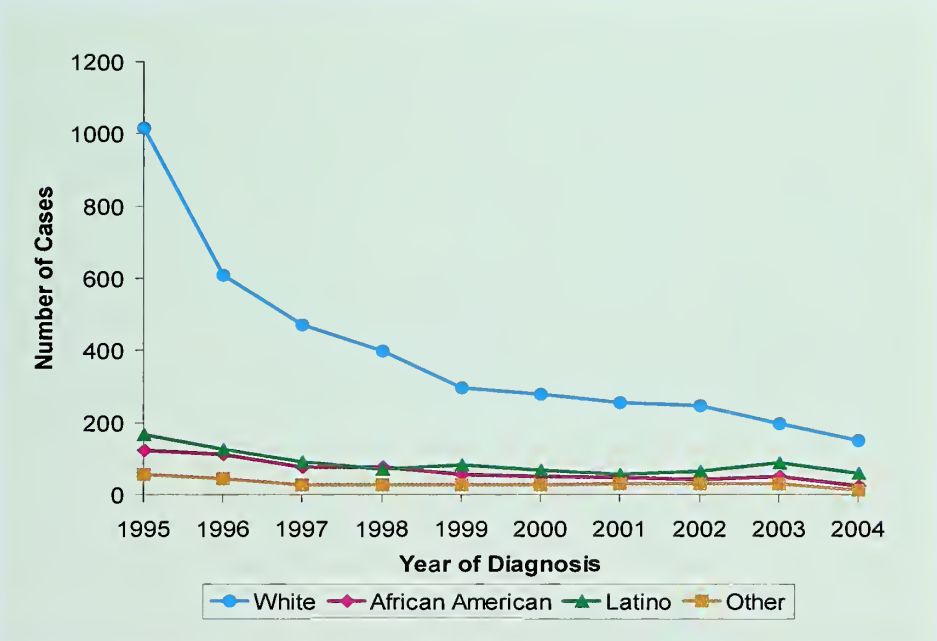
Figure 8.1 AIDS cases, deaths, and prevalence among MSM*, San Francisco, 1995-2004



* Includes MSM and MSM IDU.

The majority of San Francisco AIDS cases have occurred among white MSM (Figure 8.2). Although the number of AIDS cases has declined among all MSM, whites still account for the greatest number of MSM AIDS cases followed by Latino MSM. Of note, the exact numbers of MSM by race/ethnicity are not known, rates per 100,000 are therefore uncertain.

Figure 8.2 AIDS cases among MSM* by race/ethnicity, San Francisco, 1995-2004



* Includes MSM and MSM IDU.

HIV behavior, prevalence and incidence data from special studies

Stop AIDS Project

The Stop AIDS Project collects information on sexual behavior and self-reported HIV status through the course of their outreach HIV prevention activities for MSM in San Francisco. Their data provide an opportunity to track annual trends in HIV-related risk behavior in a large, community-recruited sample of MSM.

Figure 8.3 illustrates trends in unprotected anal intercourse (UAI) from 1998 through 2004 by self-reported HIV status. An overall trend of increasing UAI is apparent among HIV-positive MSM for the whole time period. A decrease in UAI was observed between 2003 and 2004 among HIV-negative MSM. Figure 8.3 also illustrates that UAI is most commonly reported by HIV-positive MSM.

Figure 8.4 shows the proportion of MSM who report having UAI with one or more sex partners whose HIV status was not known to them. This measure most closely gauges the potential for HIV transmission to occur by excluding sex between individuals known to be of the same HIV status. UAI among potentially HIV-serodiscordant men increased from 1998 to 2001 and then decreased from 2001 to 2004 for both HIV-positive and HIV-negative MSM.

Figure 8.3 Percent of MSM reporting unprotected anal intercourse by self-reported HIV status in the last six months, the Stop AIDS Project, San Francisco, 1998-2004

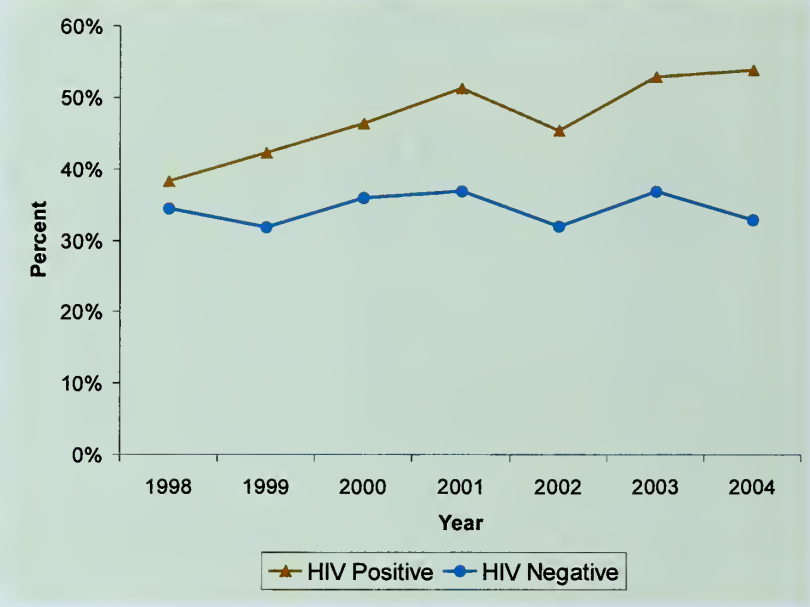
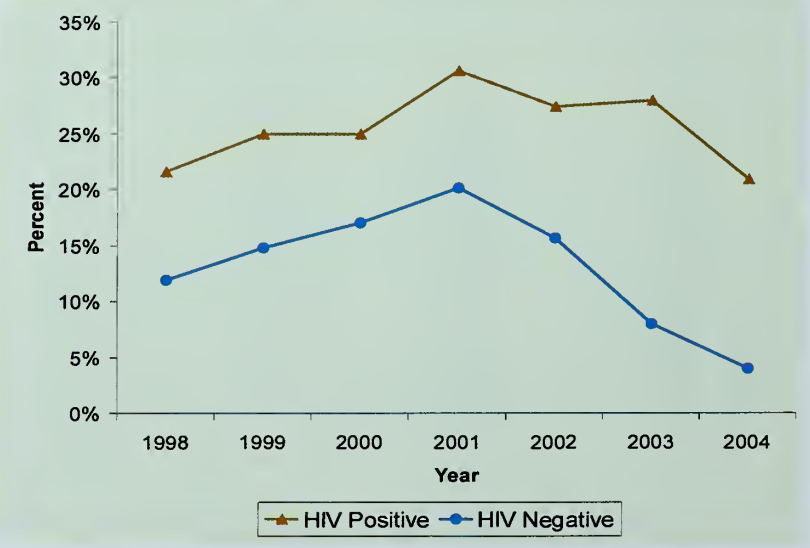


Figure 8.4 Percent of MSM reporting unprotected anal intercourse with at least one partner of unknown HIV status* in the last six months, the Stop AIDS Project, San Francisco, 1998-2004



* For MSM who did not know or report their HIV status, any UAI was considered potentially serodiscordant.

Behavioral Risk Factor Survey

The San Francisco Behavioral Risk Factor Survey (BRFS) was a telephone survey conducted between November 2001 and June 2002 among adults over the age of eighteen years who lived in San Francisco. Eligible participants were asked about their sexual and drug-use behaviors and their HIV/AIDS knowledge and attitudes.

Of the 2,036 participants interviewed, 1,495 (73%) reported sexual behavior in the prior 12 months. Of the men, 22% reported sex with men and 6% of the women reported sex with women. (Figure 8.5)

Figure 8.5 Gender of sexual partners in the past 12 months, the Behavioral Risk Factor Survey, San Francisco, November 2001-June 2002

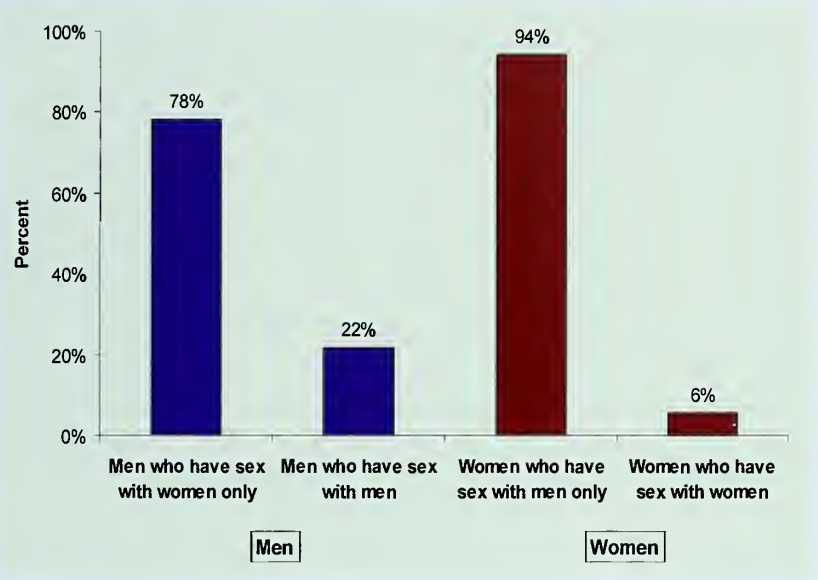
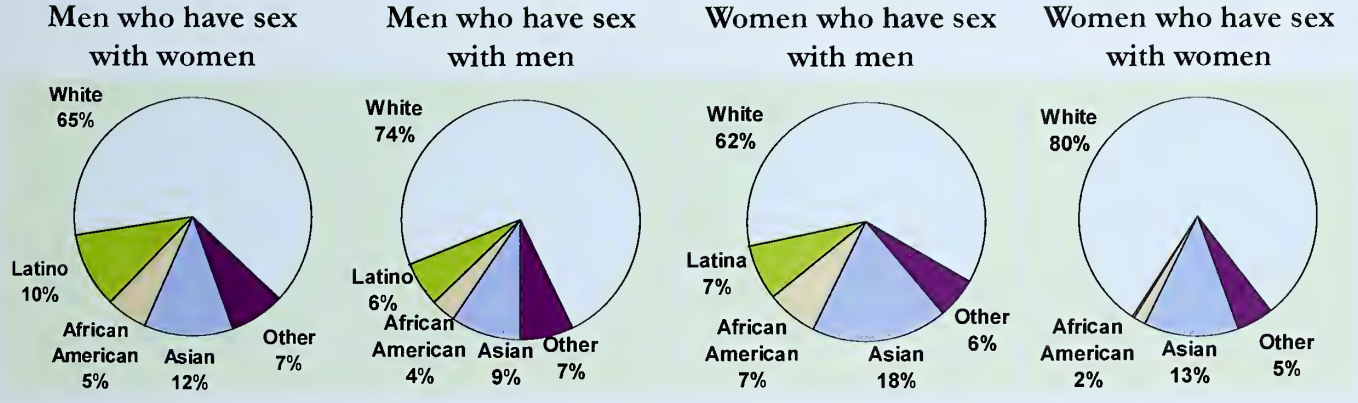


Figure 8.6 shows the racial breakdown for the men and women who reported sexual behavior in the past 12 months.

Figure 8.6 Racial breakdown by gender of sexual partners, the Behavioral Risk Factor Survey, San Francisco, November 2001-June 2002

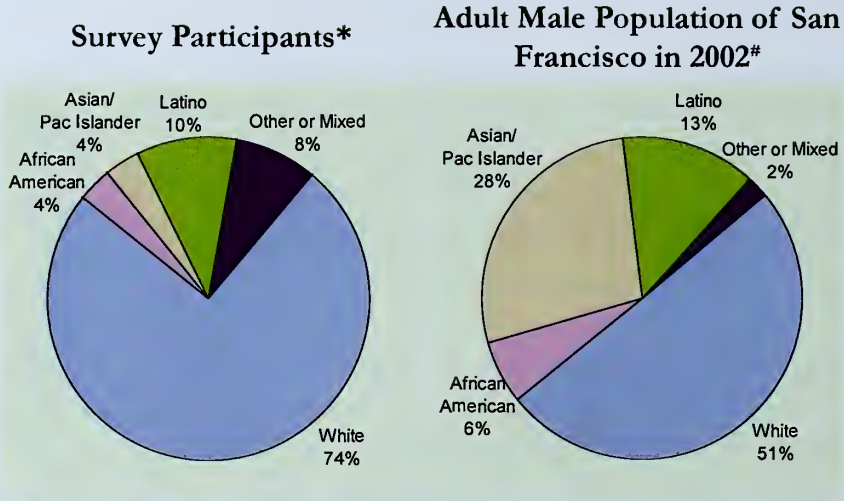


Telephone Survey of MSM

A random digit dial telephone survey of 1,976 MSM in San Francisco was conducted in 2002. This population-based survey provides an opportunity to estimate the racial and ethnic distribution of MSM in San Francisco. In this study, after weighting the sample for survey design, 74% of the MSM were white, 10% were Latino, 8% were mixed or other race, and 4% were Asian/Pacific Islander and African American, respectively (Figure 8.7). In contrast, the most recent census indicates that 51% of the male population in San Francisco is white, 28% Asian/Pacific Islander, 13% Latino, 6% African American, and only 2% of mixed or other races. Thus, the MSM population is disproportionately white. Also, a greater proportion of MSM are of mixed/other races than the general male San Francisco population. However, differences in the methods used to ascertain of mixed-race status may account for these variations.

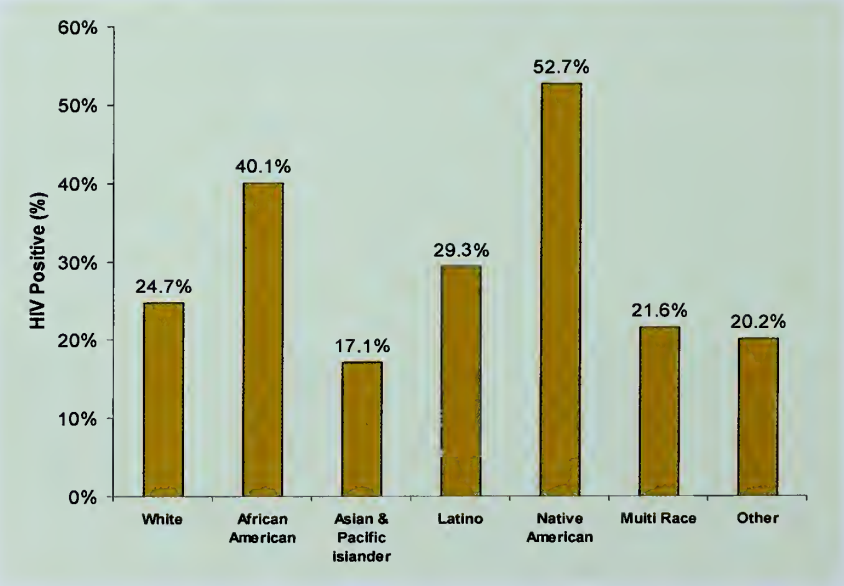
HIV prevalence information in this telephone survey was obtained by self report. Men who did not report being HIV-infected were offered HIV testing through a mail-in urine test. Overall prevalence was 25.2%. HIV prevalence was highest among Native American, African American, and Latino MSM and lowest among Asian and Pacific Islander MSM (Figure 8.8).

Figure 8.7 MSM telephone survey participants and San Francisco adult male population by race/ethnicity, 2002



* Percents are weighted for survey design.
\# Adult males are older than 18 years old. Population numbers from Demographic Research Unit, California Department of Finance.

Figure 8.8 HIV prevalence* by race among MSM, Telephone Survey, San Francisco, 2002



* Percents are weighted for survey design.

HIV transmission is most likely to occur when HIV-infected men engage in unprotected insertive anal intercourse (UIAI) with partners who are not HIV-infected. Of the 491 HIV-infected MSM in the telephone survey, 81 (16.5%) reported engaging in UIAI with a potentially serodiscordant male partner (i.e., they were HIV-uninfected or of unknown status). A high proportion of these men also reported exchanging sex for money or drugs, a recent diagnosis of a sexually transmitted disease, use of illicit drugs, or meeting their sex partners on the Internet (Table 8.1). Approximately one quarter of these HIV-infected men agreed with statements suggesting that HIV is less likely to be transmitted from men who are taking highly active antiretroviral therapies and that they are less careful about safe sex and drug use because of improved treatment for HIV infection.

Table 8.1 Unprotected insertive anal intercourse among HIV-positive MSM with non primary partners whose HIV status was negative or unknown, Telephone Survey, San Francisco, 2002

Characteristic	Reporting UIAI (n=81) %*
Risk Behaviors#	
Received money/drugs for sex	42.6
Diagnosed with STD	37.4
Club drug use	33.6
Methamphetamine use	29.9
Sex with partner from Internet	29.3
Gave money/drugs for sex	28.3
Amyl nitrite (popper) use	28.1
Viagra use	27.5
Cocaine use	24.1
HIV Transmission Attitudes	
Agrees with the statement "HIV-positive men on HAART or combination drug therapy are less infectious than HIV-positive men not on such drugs."	25.1
Agrees with the statement "You are less careful about being safe with sex or drugs than you were several years ago because there are better treatments for HIV now."	26.5
Medical Care for HIV	
Has received HIV-specific medical care	16.4
Receiving HAART	16.2

* Percents are weighted for survey design.
\# Behaviors in past 12 months.

HIV-uninfected men who engage in unprotected receptive anal intercourse (URAI) with HIV-infected partners or partners who may be infected but are unaware of their infection are at great risk of acquiring HIV infection. Of the 1,485 HIV-uninfected MSM in the telephone survey, 79 (5.3%) reported engaging in URAI with a potentially serodiscordant male partner. Use of illicit drugs was prevalent among these men; notably, 37% reported methamphetamine use (Table 8.2). In addition, over ten percent of these men reported receiving money or drugs in exchange for sex, having been recently diagnosed with a sexually transmitted disease, or meeting their sex partners on the Internet. Over 16% of these men agreed with a statement indicating that they are less safe with sex and drugs because of the availability of improved treatments for HIV infection.

Table 8.2 Unprotected receptive anal intercourse among HIV-negative MSM with non primary partners whose HIV status was positive or unknown, Telephone Survey, San Francisco, 2002

Characteristic	Reporting URAI (n=79) %*
Risk Behaviors#	
Methamphetamine use	36.6
Received money/drugs for sex	18.2
Diagnosed with STD	16.6
Amyl nitrite (popper) use	16.0
Sex with partner from Internet	12.1
Club drug use	11.0
Cocaine use	10.6
Viagra use	8.9
Gave money/drugs for sex	7.6
HIV Transmission Attitudes	
Agrees with the statement "HIV-positive men on HAART or combination drug therapy are less infectious than HIV-positive men not on such drugs."	5.6
Agrees with the statement "You are less careful about being safe with sex or drugs than you were several years ago because there are better treatments for HIV now."	16.3

* Percents are weighted for survey design.
\# Behaviors in past 12 months.

Illicit drug use was ascertained among the 1,976 MSM participating in the telephone survey. Popper use was reported most frequently, followed by club drugs and methamphetamine (Table 8.3). Use of poppers and methamphetamine was more common among the HIV-infected men.

Table 8.3 Illicit drug use among MSM, Telephone Survey, San Francisco, 2002

Type of Drug Use#	Reporting Behavior %*	HIV+ %	HIV- %
Amyl Nitrites (Poppers)			
Weekly/daily	4.1	7.4	3.0
Three days/month or less	21.4	29.1	18.7
Did not use at all	74.5	63.4	78.4
Methamphetamine			
Weekly/daily	3.3	7.1	2.0
Three days/month or less	13.5	18.9	11.6
Did not use at all	83.2	74.0	86.4
Club Drugs			
Weekly/daily	0.5	0.8	0.5
Three days/month or less	20.0	20.5	19.9
Did not use at all	79.4	78.7	79.7
Cocaine			
Weekly/daily	0.7	0.8	0.6
Three days/month or less	14.1	15.7	13.6
Did not use at all	85.2	83.5	85.8

Behaviors in past 12 months.
* Percents are weighted for survey design.

Viagra use and factors associated with its use were ascertained among the 1,976 MSM in the telephone survey. Over 18% of the men reported using Viagra in the past 12 months (Table 8.4). Viagra use was reported more frequently among men aged 35 years and older and among white men and men of mixed race. Viagra use was reported frequently among men who were recently diagnosed with a sexually transmitted disease, as well as among men who reported using illicit drugs.

Table 8.4 Prevalence of Viagra use among MSM, Telephone Survey, San Francisco, 2002

Characteristic	Number	Weighted prevalence (%)
Total	1,976	18.3
Age Group (Years)		
18-24	52	4.3
25-34	375	15.8
35-44	706	19.9
45-54	485	19.5
55+	358	18.7
Race/Ethnicity		
White	1,490	19.3
African American	63	12.3
Asian/Pacific Islander	67	15.4
Latino	193	16.9
Native American/Alaska Native	7	0.0
Mixed race	53	25.5
Other	103	11.7
Sexual Behavior		
Gave money/drugs in exchange for sex	100	26.7
Received money/drugs in exchange for sex	46	21.6
Met sex partner on Internet	526	28.0
Unprotected insertive anal sex with non primary male partner of unknown or different HIV status	237	30.1
Unprotected receptive anal sex with non primary male partner of unknown or different HIV status	172	26.9
HIV Infected	500	26.8
Diagnosed with STD	212	29.7
Ever Injected Drugs	306	23.9
Methamphetamine Use in Past 12 Months		
Weekly/daily	60	37.8
Three days/month or less	245	35.7
Did not use at all	1,444	16.2
Amyl Nitrites (Poppers) Use in Past 12 Months		
Weekly/daily	73	27.7
Three days/month or less	381	32.4
Did not use at all	1,297	15.4
Club Drug Use in Past 12 Months		
Weekly/daily	10	49.1
Three days/month or less	359	34.6
Did not use at all	1,381	15.6
Cocaine Use in Past 12 Months		
Weekly/daily	12	4.7
Three days/month or less	244	29.1
Did not use at all	1,494	18.1

National Behavioral Surveillance Survey

In 2003, the CDC initiated a national behavioral surveillance system in the largest US metropolitan areas (see Technical Notes "National Behavioral Surveillance"). A total of 1,574 MSM were surveyed in 2003 through 2004, with a sub-sample of 450 tested for HIV antibodies. Figure 8.9 shows HIV prevalence among those tested. Overall HIV prevalence was 22%. Of note, 17% of MSM were already aware of their HIV-positive status while 5% (20% of those infected) were previously unaware of their infection.

Figure 8.9 HIV prevalence among MSM, the National Behavioral Surveillance Survey, San Francisco, 2003-2004

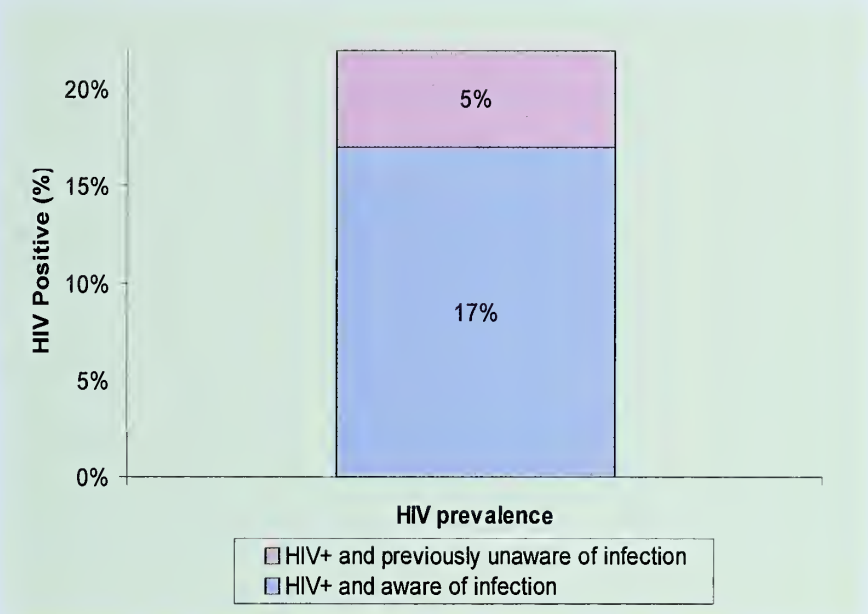


Figure 8.10 shows HIV prevalence by race/ethnicity for MSM participating in the National Behavioral Surveillance Survey. Consistent with HIV/AIDS surveillance data and many other studies, African American MSM had the highest prevalence of HIV at 26%. HIV prevalence was comparable among whites (24%), Latinos (23%) and persons of mixed race/ethnicity (24%).

Figure 8.10 HIV prevalence among MSM by race/ethnicity, the National Behavioral Surveillance Survey, San Francisco, 2003-2004

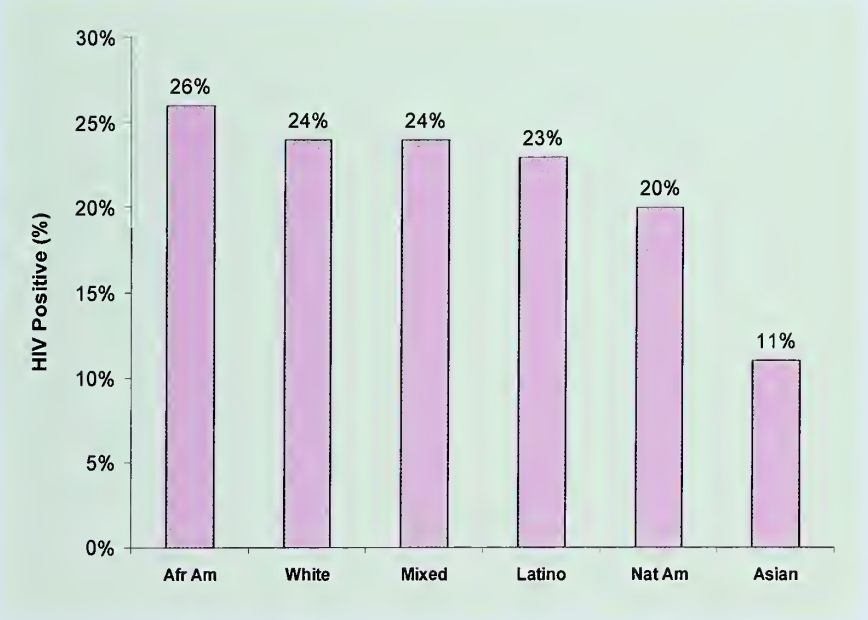


Figure 8.11 shows HIV prevalence peaking among MSM in their early 40s at 43%. Because HAART extends the life of persons with HIV, the prevalence of infection among older age groups is high. In addition, new HIV infections continue to occur among older MSM in San Francisco, as suggested by the increase in HIV prevalence among MSM in their late 30s to early 40s. The data also suggest a high rate of new infection among MSM between their late 20s and early 30s.

Figure 8.11 HIV prevalence among MSM by age, the National Behavioral Surveillance Survey, San Francisco, 2003-2004

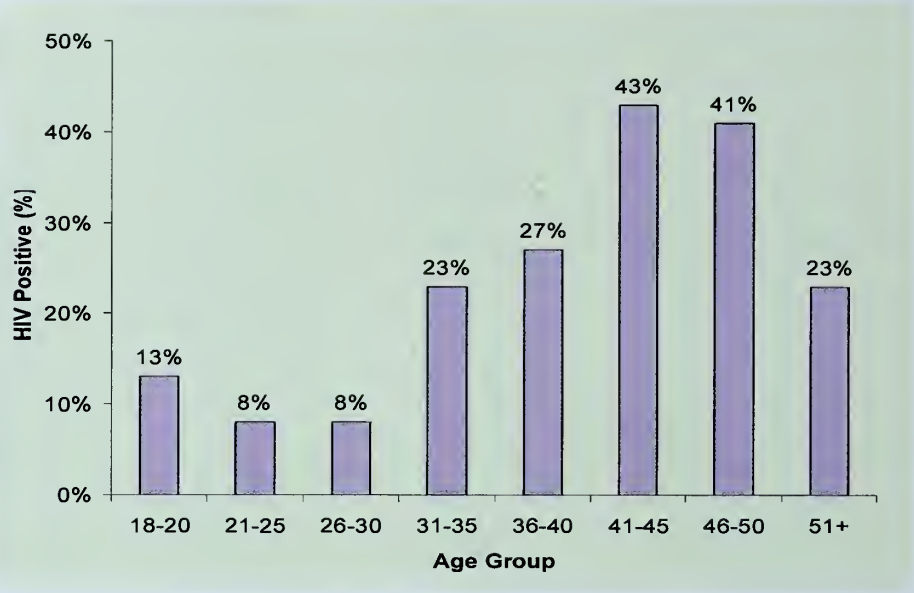
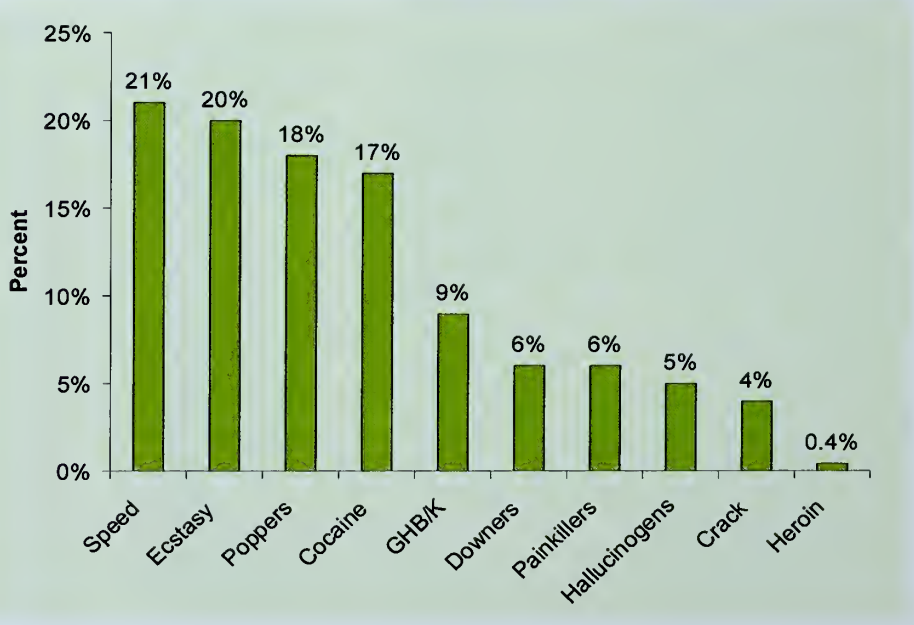


Figure 8.12 shows substance use in the last 12 months among MSM participating in the National Behavioral Surveillance Survey. The high prevalence of speed (methamphetamine) use, at 21%, is of particular concern as it has been associated with HIV infection in other studies.

Figure 8.12 Substance use in the past 12 months among MSM, the National Behavioral Surveillance Survey, San Francisco, 2003-2004



The EXPLORE Study

The EXPLORE study was a multi-site behavioral study conducted between 1999 and 2003 comparing standard HIV testing and counseling to an intensive behavioral intervention among HIV-negative men who had sex with men. To be eligible, men had to report an anal sex partner in the prior 12 months and not be in an monogamous relationship with an HIV-negative male. Participants were followed for a median of 3.25 years. HIV infection rates were not significantly different between the standard and intensive intervention arms. The San Francisco Department of Public Health Research Section enrolled 736 men in the study. HIV incidence was 2.5%. At baseline, San Francisco participants reported a median of 9 partners; 47% reported unprotected sex with an HIV-positive or unknown serostatus partner in the past 6 months. Although substance use was not an enrollment criterion, use of substances among EXPLORE participants was common (Table 8.5). Among the twenty-three percent of participants reporting methamphetamine use in the past 6 months, HIV incidence was 5.7%, compared with 1.5% among non users (Figure 8.13).

Figure 8.13 HIV incidence overall and by methamphetamine use, the EXPLORE study, San Francisco, 1999-2003

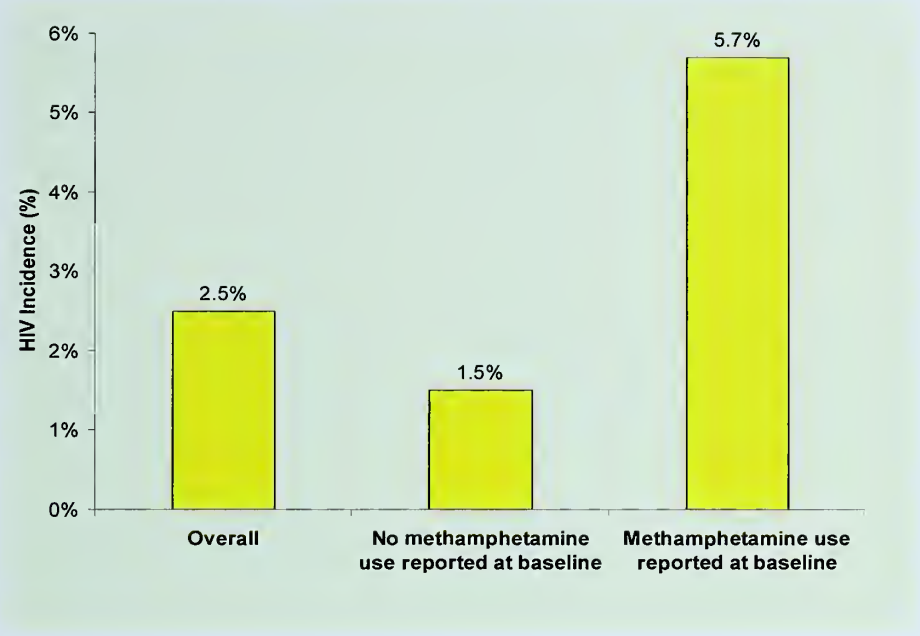


Table 8.5 Baseline drug use among MSM, the EXPLORE study, San Francisco, 1999-2003

Type of Drug	% Reporting Use in the Prior 6 Months
Poppers (amyl nitrites)	36%
Hallucinogens (includes ecstasy)	32%
Sniffed cocaine	19%
Methamphetamines	23%
Crack cocaine	6%
Any injection drug use	10%

Sexually transmitted diseases among MSM

Figure 8.14 shows trends in male rectal gonorrhea and male gonococcal proctitis in San Francisco from 1997 through 2004. Data on male rectal gonorrhea originate from case reporting from laboratories and health providers throughout the city. Data on male gonococcal proctitis originate from the municipal STD clinic only. Infection with gonorrhea is a biological marker for high risk sexual behavior as well as a factor that enhances the acquisition and spread of HIV. Among men, rectal gonorrhea is a marker for unprotected receptive anal sex.

The last several years have witnessed a steady increase in reported cases of male rectal gonorrhea, consistent with rises in unprotected anal sex among MSM. Male gonococcal proctitis are cases with symptomatic infection. Data on male gonococcal proctitis suggest that some of the increase in reported male rectal gonorrhea may be due to increased screening.

Data may underestimate true levels of infections due to several factors, including lack of rectal screening by many health providers, under reporting, delayed reporting, and the large proportion of cases that do not manifest symptoms.

Figure 8.14 Male rectal gonorrhea and male gonococcal proctitis among MSM, San Francisco, 1997-2004

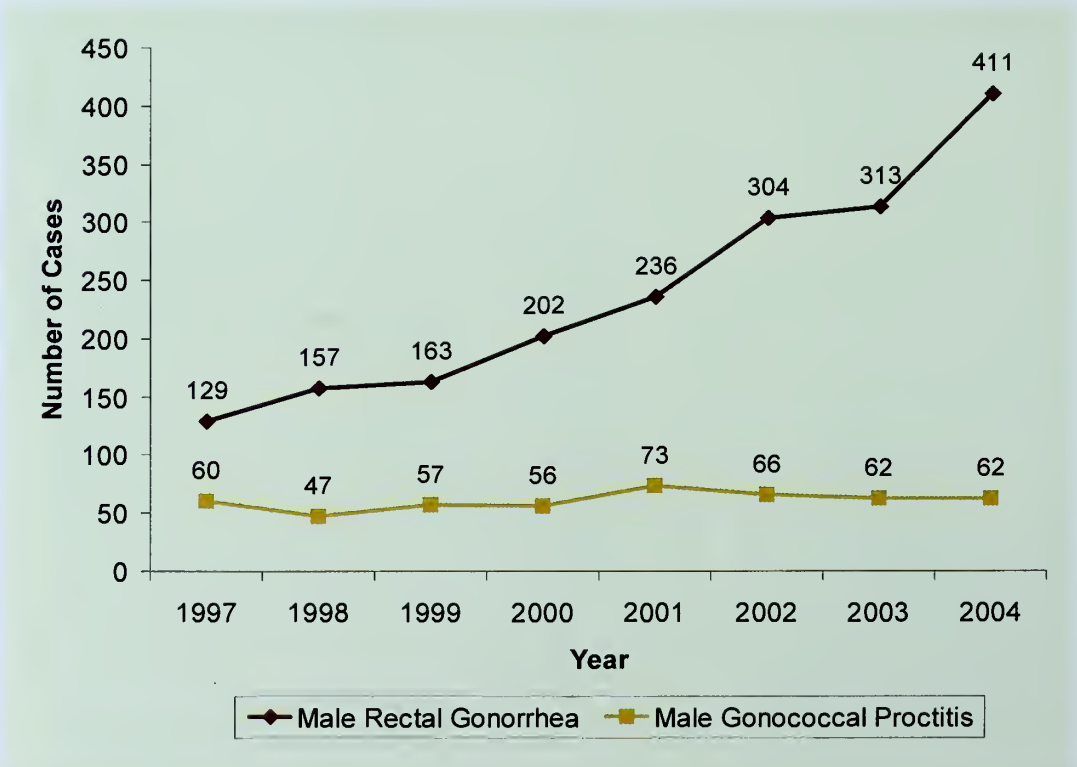
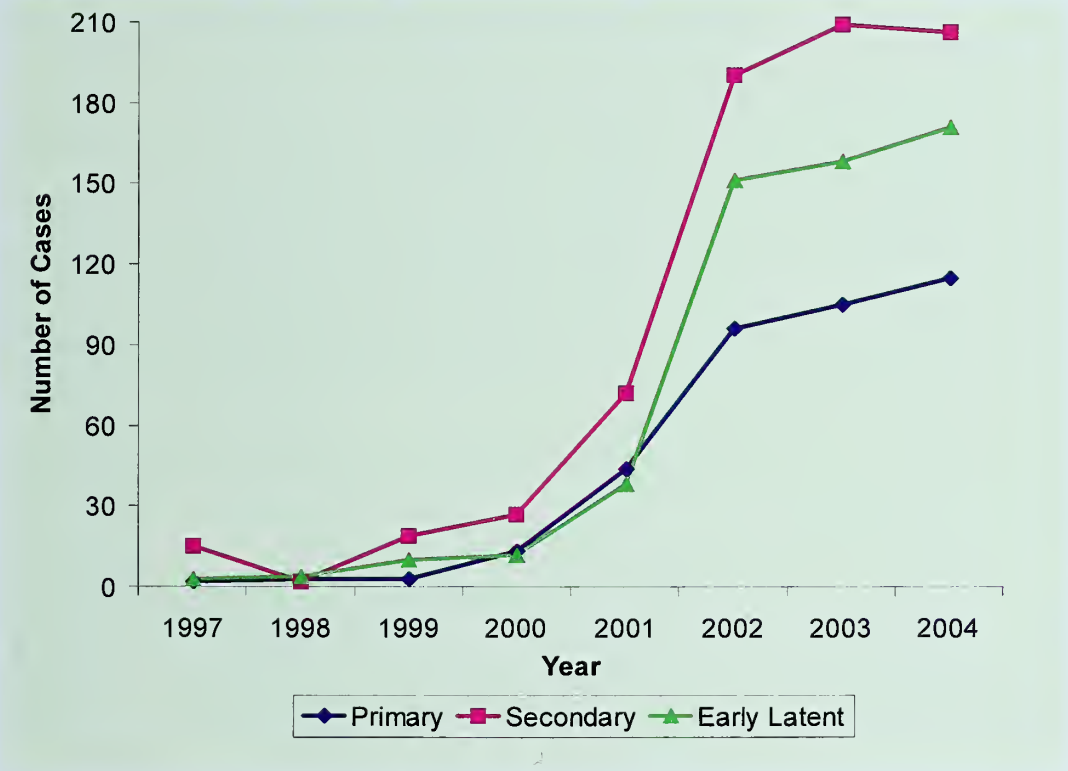


Figure 8.15 shows trends in primary, secondary, and early latent cases of syphilis among MSM in San Francisco from 1997 through 2004. Data originate from case reporting from laboratories and health providers throughout the city although the majority are patients seen at the municipal STD clinic. Like gonorrhea, syphilis is a biological marker for high risk sexual behavior as well as a factor that enhances the acquisition and spread of HIV. The increase in early syphilis among MSM in San Francisco since 1998 is dramatic.

Figure 8.15 Syphilis among MSM, San Francisco, 1997-2004



9 HIV/AIDS among Injection Drug Users

AIDS surveillance data

Injection drug use by non-MSM comprises the third most frequent exposure group among cumulative AIDS cases in San Francisco, after MSM and MSM IDU. This is in contrast to the nation as a whole in which non-MSM IDU comprise the second most frequent exposure group. The number of new AIDS cases among non-MSM IDU has declined (Figure 9.1). The number of deaths in this group declined substantially in 1997 and more modestly thereafter. The number of non-MSM IDU living with AIDS has increased and as of December 31, 2004 there were 812 non-MSM IDU living with AIDS in San Francisco.

From 1995 to 2004, the greatest number of AIDS cases among non-MSM IDU occurred among African Americans (Figure 9.2). Whites accounted for the second greatest number of cases in this risk group. The number of new AIDS cases diagnosed in 2003 increased among non-MSM IDU of all races and ethnicities.

Figure 9.1 AIDS cases, deaths, and prevalence among non-MSM IDU, San Francisco, 1995-2004

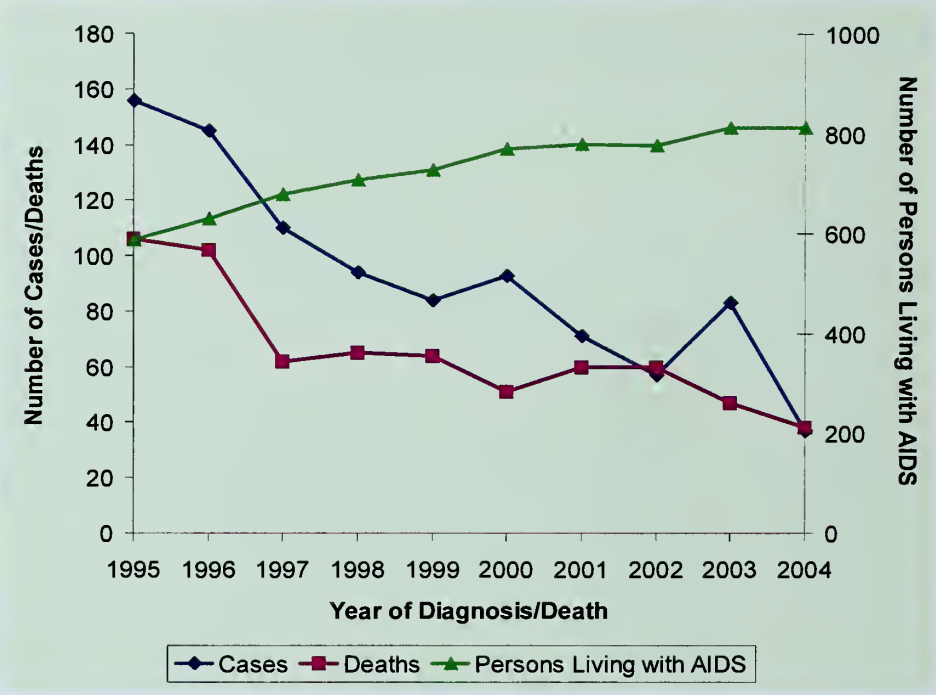


Figure 9.2 AIDS cases among non-MSM IDU by race/ethnicity, San Francisco, 1995-2004

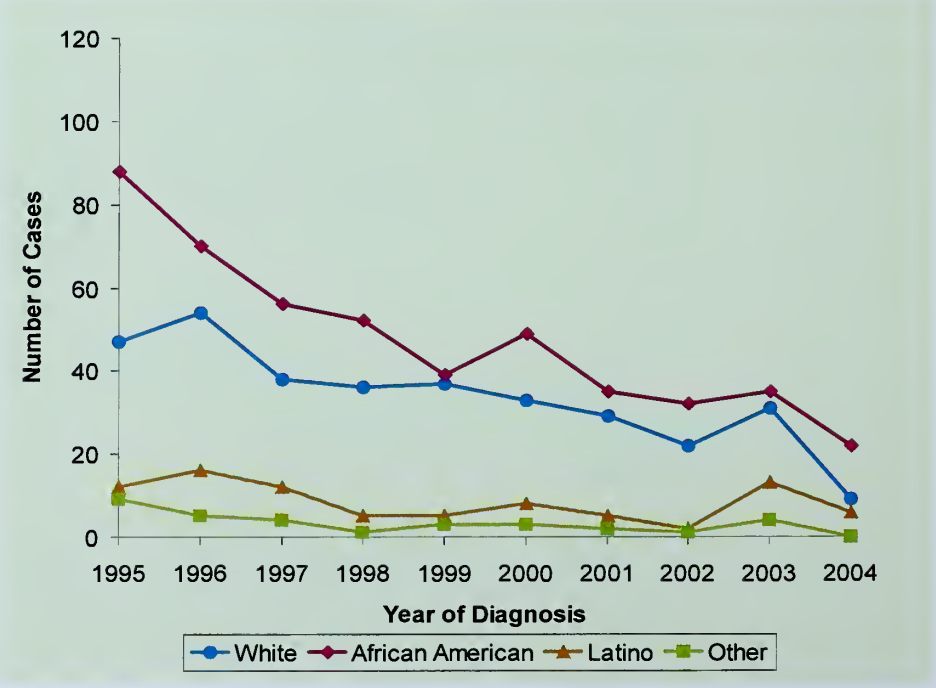


Table 9.1 shows the risk and race/ethnicity distribution of AIDS cases directly or indirectly associated with injection drug use. MSM IDU account for the majority (64%) of IDU-associated AIDS cases followed by male heterosexual IDU (22%). Of the MSM IDU cases, 71% are white and 16% African American. This differs markedly from the heterosexual male and female IDU AIDS cases in which 50% and 53% respectively, are African American.

Table 9.1 Injection drug use-associated AIDS cases by exposure category and race/ethnicity, diagnosed through December 2004, San Francisco

		Race/Ethnicity Distribution by Percent			
Exposure Category	Total Number	White	African American	Latino	Other
Male heterosexual IDU	1,311	36%	50%	12%	2%
Female heterosexual IDU	609	32%	53%	10%	5%
MSM IDU	3,728	71%	16%	10%	3%
Lesbian IDU	42	48%	33%	12%	7%
Heterosexual contact with IDU	140	35%	42%	15%	8%
Children whose mothers are IDUs or mother's sex partners are IDUs	23	22%	43%	17%	17%

10 HIV/AIDS among Heterosexuals

AIDS surveillance data

The number of AIDS cases among persons who acquired HIV infection through heterosexual contact is small relative to other risk groups. The number of new AIDS cases in this group has declined (Figure 10.1). The number of deaths among heterosexual non-IDU has also declined and only six deaths in this group occurred in 2004. Although reporting of death is not yet complete, it is likely that the number of deaths among heterosexual AIDS cases will remain small. The number of heterosexual non-IDU living with AIDS has increased steadily to a total of 173 by December 31, 2004.

Trends in heterosexual AIDS cases by race/ethnicity fluctuate year to year due to small numbers (Figure 10.2). Overall, African Americans account for the largest number of heterosexual AIDS cases since 1995.

Figure 10.1 AIDS cases, deaths, and prevalence among heterosexuals, San Francisco, 1995-2004

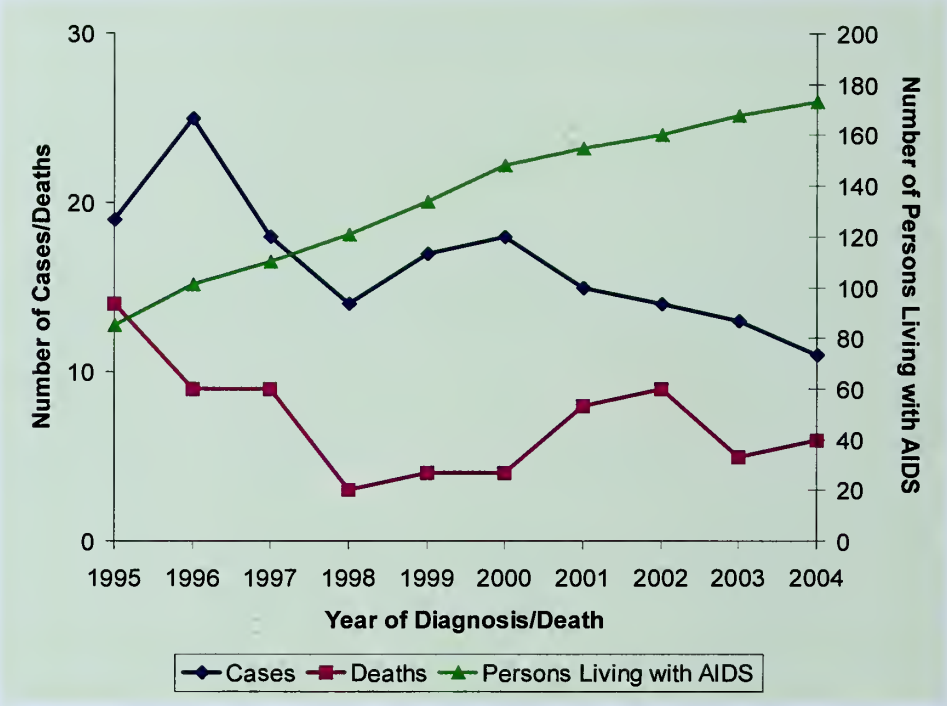
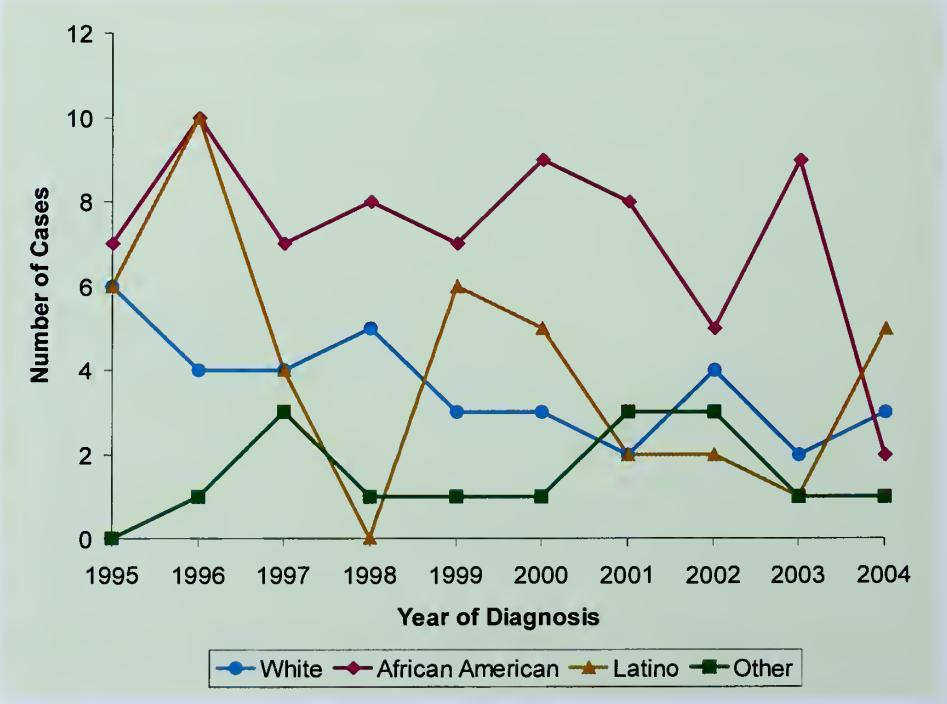


Figure 10.2 AIDS cases among heterosexuals by race/ethnicity, San Francisco, 1995-2004



The majority of heterosexually acquired AIDS cases are women (Table 10.1). Of the 238 women in this group, 108 (45%) reported sex with an IDU. Among the 83 men in this risk group, 32 (38%) reported an IDU partner. Sixty-one percent of men and 36% of women reported sex with an HIV-infected partner of unknown risk.

Table 10.1 AIDS cases among heterosexuals by exposure category and gender, diagnosed through December 2004, San Francisco

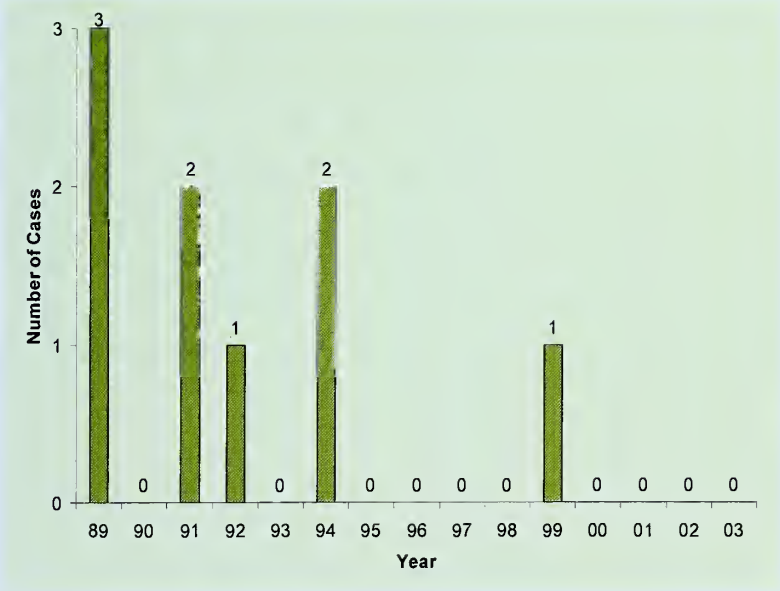
	Men		Women	
Exposure Category	**Number**	**%**	**Number**	**%**
Sex with injection drug user	32	38%	108	45%
Sex with bisexual men	N/A	N/A	44	18%
Sex with HIV+ transfusion recipient/persons with hemophilia	<5	-	<5	-
Sex with HIV+ persons of unknown risk	51	61%	86	36%
Total	**83**		**238**	

HIV prevalence data

Military Recruits

Figure 10.3 shows the number of new military recruit applicants from San Francisco who were found to be HIV-positive. HIV infection among San Franciscans wishing to enter military service continues to be rare - not a single recruit has tested positive since 1999. Since the year 2000, a total of 1,429 San Franciscans volunteered for military service, increasing from 304 in 2000 to 397 in 2003. Interpretation of these data must take into account the deliberate exclusion of gay men and persons with injection drug use histories from entering military service.

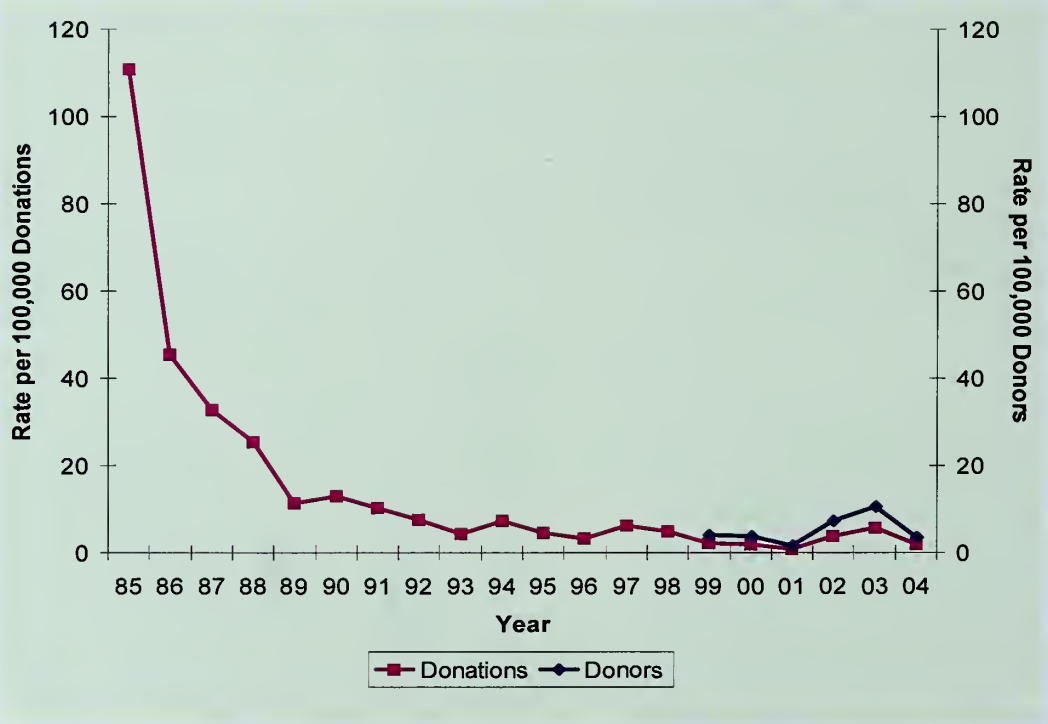
Figure 10.3 HIV cases among military recruits, San Francisco, 1989-2003



Blood Donations

HIV prevalence data among blood donations (keeping in mind that multiple donations can be made by one donor) are available from 1985 to 2004, and the data among unique donors are available from 1999 to 2004. The proportion of blood donors and blood donations testing HIV-positive has remained low and stable since the early 1990s (Figure 10.4). Blood donation is voluntary and donors are pre-screened for risk factors associated with HIV infection prior to giving blood. Although blood donors constitute a large population of heterosexual, non-injection drug users, interpretation of these data must take into account that only persons at lowest risk for HIV are encouraged to donate blood.

Figure 10.4 HIV prevalence rate among blood donations and donors through 2004, San Francisco Bay Area



Sexually transmitted diseases among heterosexuals

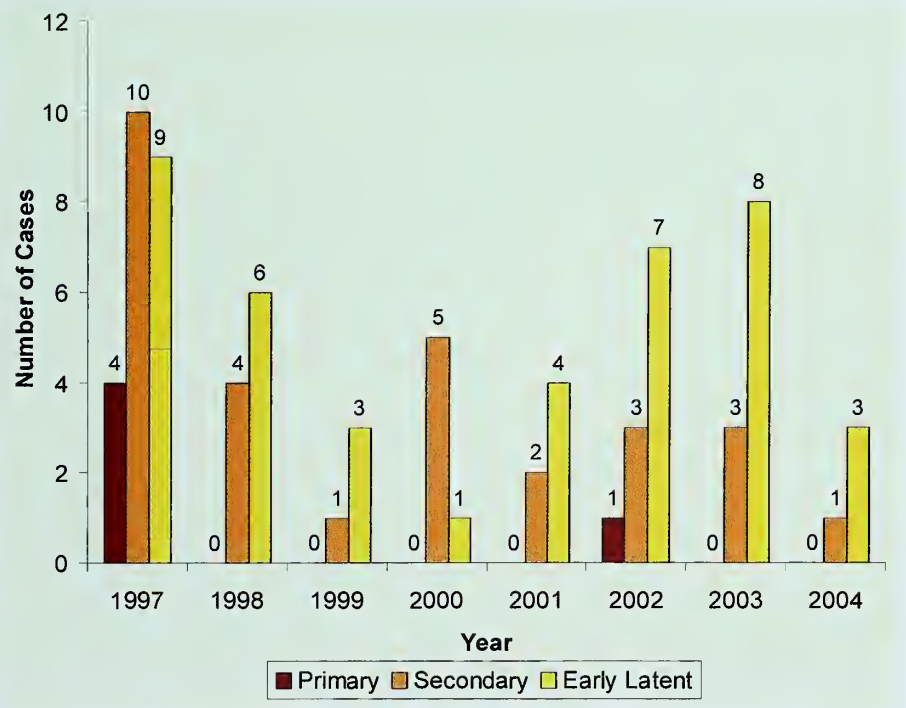
Figure 10.5 shows the annual number of primary, secondary, and early latent cases of syphilis among heterosexual men in San Francisco from 1997 through 2004. Data originate from case reporting from laboratories and health providers throughout the city, although the majority are patients seen at the municipal STD clinic. Unlike MSM, syphilis among heterosexual men remains relatively low with no upward trend.

Figure 10.5 Syphilis among heterosexual men, San Francisco, 1997-2004



Figure 10.6 shows the annual number of primary, secondary, and early latent cases of syphilis among women in San Francisco from 1997 through 2004. Data originate from case reporting from laboratories and health providers throughout the city, although the majority are patients seen at the municipal STD clinic. Among women, syphilis cases are low and stable over time.

Figure 10.6 Syphilis among women, San Francisco, 1997- 2004

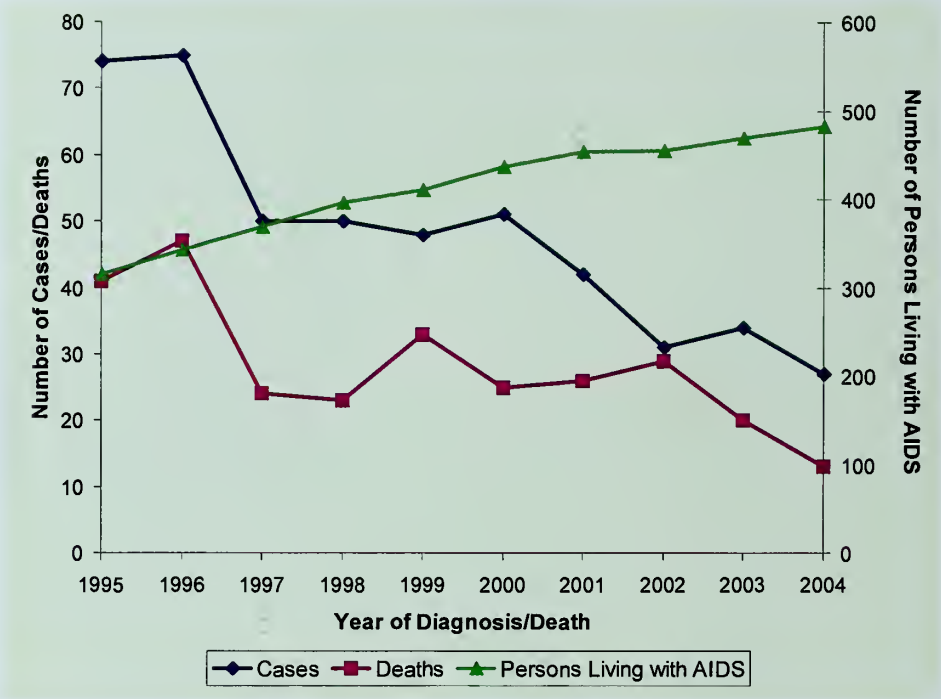


11 HIV/AIDS among Women

AIDS surveillance data

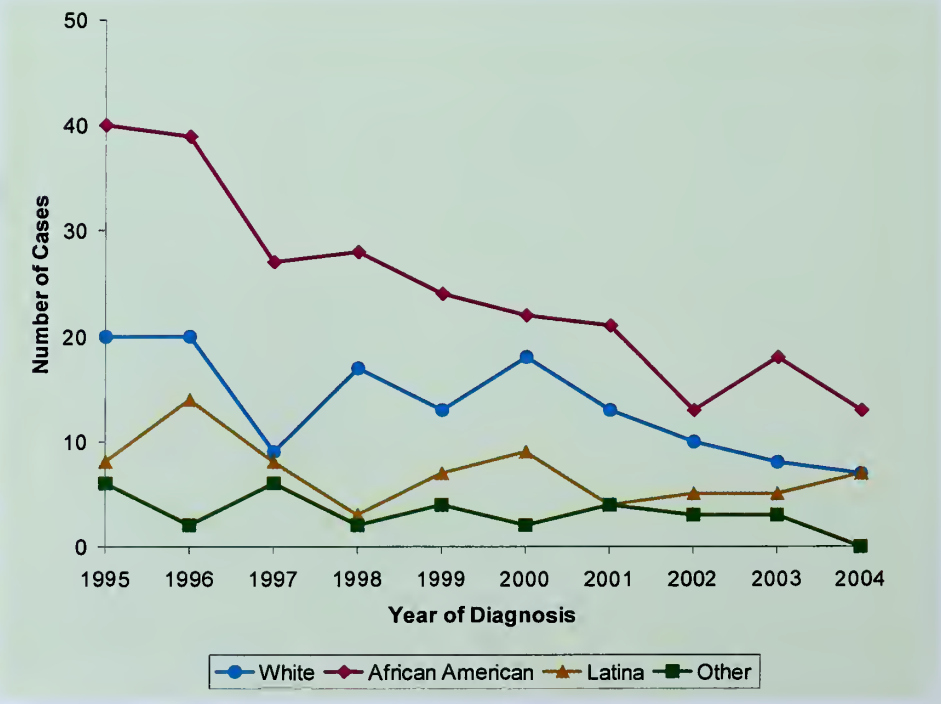
The number of AIDS cases and deaths among women in San Francisco has declined through 2004 (Figure 11.1). As of December 31, 2004 there were 483 women living with AIDS.

Figure 11.1 AIDS cases, deaths, and prevalence among women, San Francisco, 1995-2004



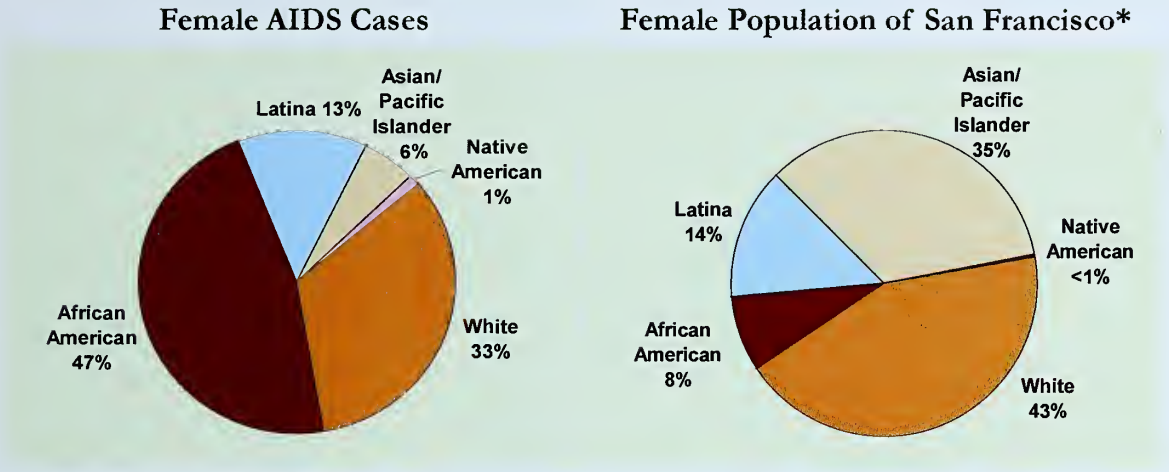
The number of new AIDS cases among African American women has been higher than women of other racial/ethnic groups between 1995 and 2004 (Figure 11.2).

Figure 11.2 Female AIDS cases by race/ethnicity, San Francisco, 1995-2004



African American women comprise a disproportionate percentage of women with AIDS in San Francisco. Among female AIDS cases, 47% occurred among African Americans, even though African American women comprise only 8% of the San Francisco female population (Figure 11.3).

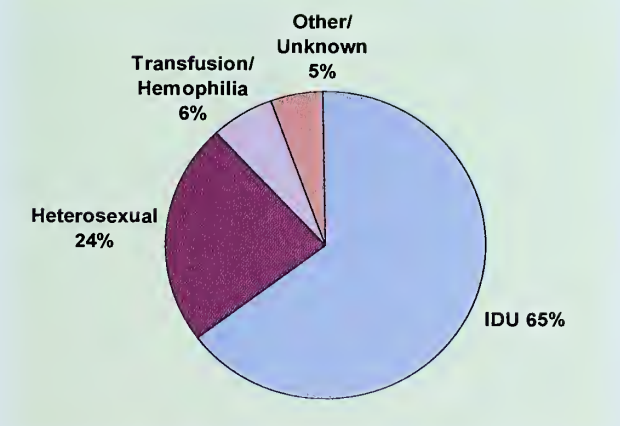
Figure 11.3 Female AIDS cases diagnosed through December 2004 and female population by race/ethnicity, San Francisco



* United States 2000 Census data.

Injection drug use (65%) is the most prominent risk exposure for women with AIDS, followed by heterosexual contact (24%) (Figure 11.4).

Figure 11.4 Female AIDS cases diagnosed through December 2004 by exposure category, San Francisco



12 HIV/AIDS among Adolescents and Young Adults

AIDS surveillance data

As of December 31, 2004, a cumulative total of 33 adolescents (aged 13-19 years) and 514 young adults (aged 20-24 years) were diagnosed with AIDS in San Francisco (Table 12.1). The characteristics of young adults with AIDS are similar to other adults; the majority are MSM, white, and male. MSM also account for the greatest proportion of AIDS cases among the 13-19 year olds. In both adolescents and young adults, MSM IDU is the second most frequent risk group.

Table 12.1 Adolescent and young adult AIDS cases by exposure category, gender, and race/ethnicity, diagnosed through December 2004, San Francisco

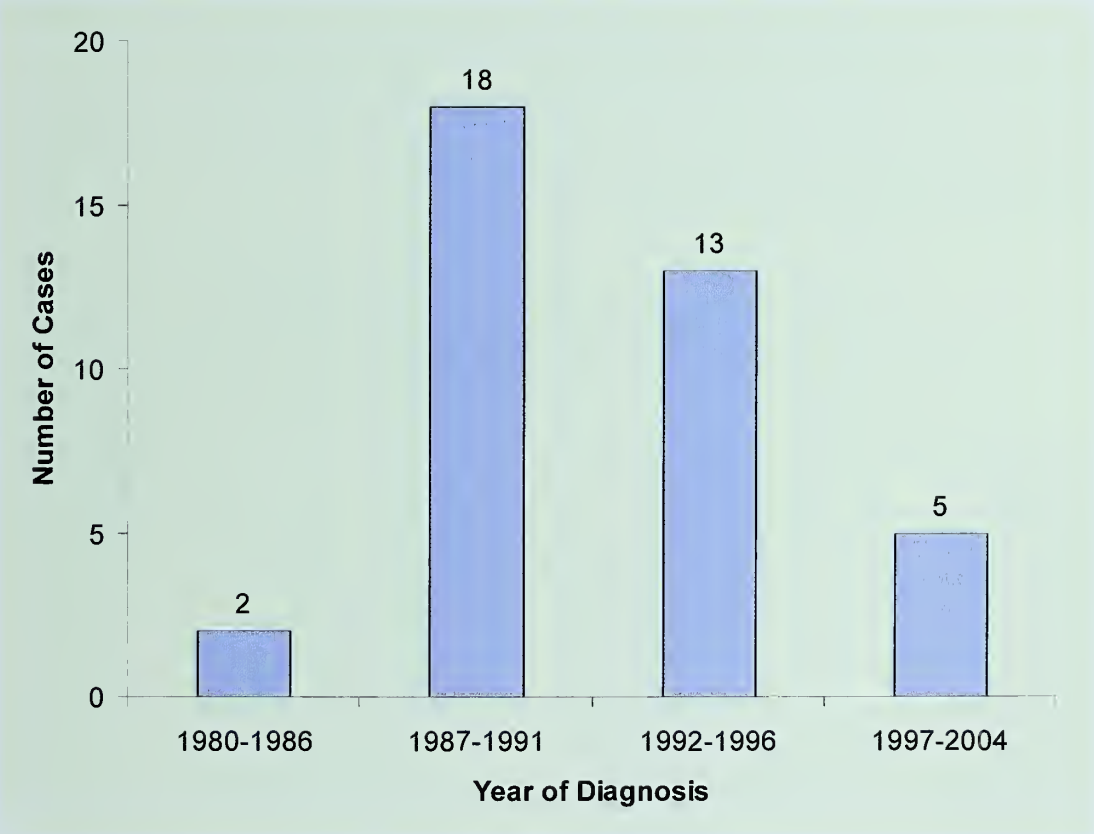
	13-19 Years Old (N=33)	20-24 Years Old (N=514)
Exposure Category		
MSM	39%	58%
IDU	0%	10%
MSM IDU	27%	26%
Transfusion/Hemophilia	9%	1%
Heterosexual	12%	4%
Perinatal	3%	0%
Other/Unknown	9%	1%
Gender		
Male	85%	93%
Female	15%	7%
Race/Ethnicity		
White	30%	59%
African American	6%	15%
Latino	55%	19%
Asian/Pacific Islander	3%	5%
Native American	6%	1%

13 HIV/AIDS among Children

AIDS surveillance data

As of December 31, 2004, a cumulative total of 38 pediatric AIDS cases (less than 13 years old) were diagnosed who resided in San Francisco at time of diagnosis. The first pediatric case was diagnosed in San Francisco in 1980 and there were two cases diagnosed before 1987 (Figure 13.1). The number of pediatric AIDS cases peaked between 1987 and 1991. Between 1992 and 1996 there were 13 pediatric AIDS cases, and five pediatric cases were diagnosed between 1997 and 2004.

Figure 13.1 Pediatric AIDS cases by year of diagnosis, San Francisco, 1980-2004



Perinatal HIV data

Data on children with HIV in San Francisco are gathered through the Pediatric Spectrum of Disease (PSD) project. The PSD project was established in 1989 by the Centers for Disease Control and Prevention and collects data from eight areas throughout the United States. In Northern California, hospital surveillance for children under 13 years old infected with HIV or infants born to infected mothers has occurred at eight pediatric hospitals (including University of California at San Francisco and San Francisco General Hospital). Records from HIV positive pediatric patients cared for through the California Children's Services program, a state agency providing funding and case management for HIV-positive children, are also included in the PSD project. Data presented here include infants who were San Francisco residents and born to mothers documented to have HIV before delivery without a history of blood or blood product transfusion before 1985.

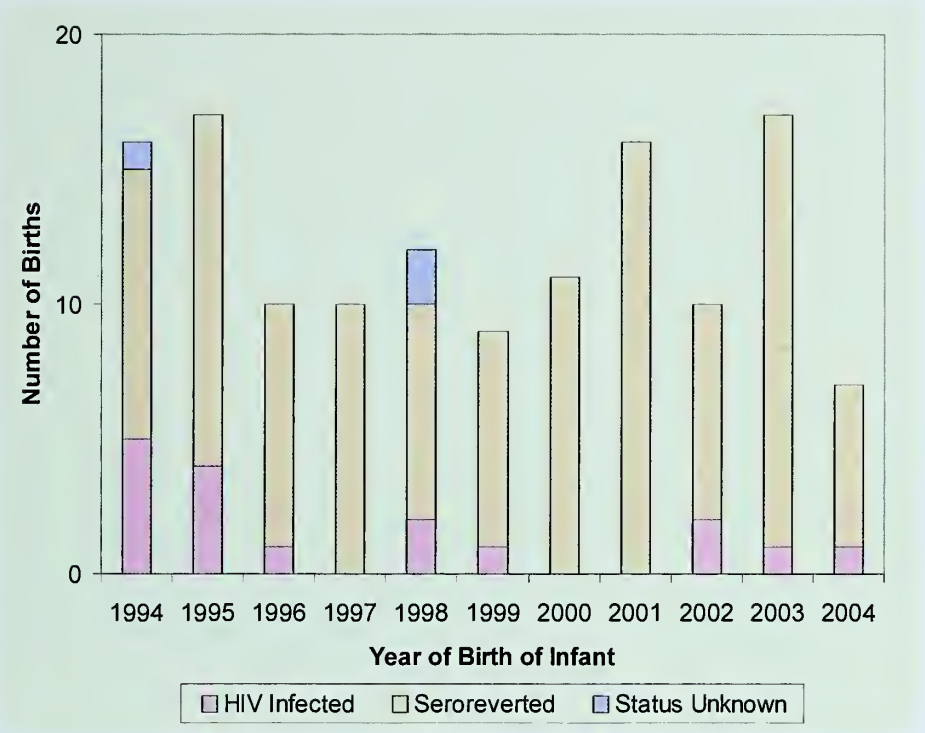
Through December 31, 2004, 232 infants were born to HIV-infected mothers in San Francisco (Table 13.1). Thirty-eight (16%) of these infants were confirmed to be HIV infected, 188 (81%) seroreverted (were determined to be uninfected after maternal antibodies disappeared), and 6 (3%) were of unknown serostatus. Of the 38 HIV-infected infants, seven are living with AIDS, 19 are living with HIV non-AIDS, and 12 have died of AIDS. Fifty-three percent of perinatally exposed infants were African American, while whites and Latinos each accounted for 20% of these infants.

Table 13.1 Infants born to HIV-infected mothers by infant HIV status and race/ethnicity, San Francisco, December 2004

	N (%)
Total	**232**
Infant HIV Status	
HIV-infected	38 (16)
AIDS (alive)	7 (3)
AIDS (dead)	12 (5)
HIV only (alive)	19 (8)
HIV only (dead)	0 (0)
Seroreverted (HIV-)	188 (81)
Unknown	6 (3)
Race/Ethnicity	
White	46 (20)
African American	122 (53)
Latino	46 (20)
Asian/Pacific Islander	13 (6)
Other/Unknown	5 (2)

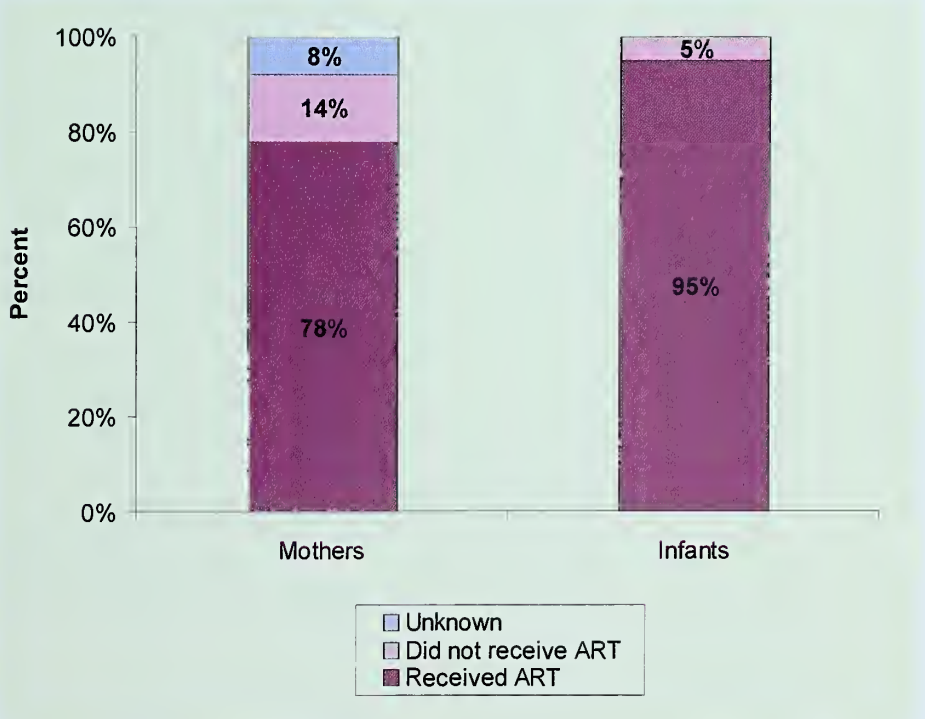
The number of perinatally exposed infants who were confirmed as HIV-infected has remained low since 1996 (Figure 13.2). Declines in perinatal transmission of HIV are due to the improved therapies for mothers throughout pregnancy and for infants to prevent perinatal transmission. In 2004, there were seven infants born to HIV-infected mothers that have been reported so far; one was HIV-infected, and six seroreverted.

Figure 13.2 Infants born to HIV-infected mothers by year of birth and infant HIV status, San Francisco, 1994-2004



Between 1995 and 2004, 78% of HIV-infected mothers received antiretroviral therapy (ART) during pregnancy and 95% of the infants received ART (Figure 13.3).

Figure 13.3 Percent of HIV-infected mothers and their infants receiving antiretroviral therapy, San Francisco, 1995-2004



14 HIV/AIDS among Transgender Persons

AIDS surveillance data

Persons with AIDS are categorized as transgender if information regarding gender identity is listed in the medical record. Information on transgender status has been collected since 1996. As of December 31, 2004, a total of 321 transgender AIDS cases were diagnosed (Table 14.1). Seventy-one percent of transgender cases were non-white compared to 27% of total AIDS cases. Transgender persons with AIDS were more likely to inject drugs than were total AIDS cases (55% vs. 22%, respectively). Transgender AIDS cases were also younger than total AIDS cases.

Table 14.1 Characteristics of transgender* AIDS cases and cumulative AIDS cases diagnosed through December 2004, San Francisco

	Transgender AIDS Cases Diagnosed Through December 2004		AIDS Cases Diagnosed Through December 2004	
Total	**321**		**26,110**	
Race/Ethnicity				
White	92	29%	18,946	73%
African American	101	31%	3,265	12%
Latino	95	30%	2,956	11%
Other/Unknown	33	10%	943	4%
Injection Drug Use				
Yes	176	55%	5,690	22%
No	145	45%	20,420	78%
Age at Diagnosis				
13 - 29	79	25%	3,091	12%
30 - 39	145	45%	11,885	46%
40 - 49	79	25%	8,116	31%
50+	18	6%	3,018	12%

* See Technical Notes "Transgender Status."

Use of HIV prevention practices among male to female transgenders

We assessed the use of HIV prevention practices and/or other HIV risk reduction strategies among male to female transgenders participating in the HIV Testing Survey, a venue-based study in which self-identified male to female transgenders were recruited from bars, clubs, streets, and agencies. Participants were interviewed about their exposure to, and use of prevention services including condom use, safer sex practices, and knowledge and use of prevention services. Participants were 18 years or older, residents of California for at least 6 months prior to the interview, and born male and identifying as female or transgender currently, or at sometime in the past.

Of the 181 eligible persons, 153 (85%) participated. Sixteen percent reported abstaining from any sexual activity (Table 14.2). Fifteen percent of those who did report sexual activity refrained from anal sex in the previous 12 months. Of those reporting receptive anal sex in the previous 12 months, 49% always used condoms and 26% reported their partners avoided ejaculation. Of those reporting insertive anal sex, 68% always used condoms and 19% intentionally avoided ejaculation. Of the 60 transgenders who injected drugs or hormones, 38% had gotten their needles from a needle exchange program. Almost 100% of the participants reported recent exposure to one of eight HIV prevention messages or services (including passive exposure to advertising or receiving free condoms), 77% had actively sought HIV prevention services such as talking with an outreach worker or calling an HIV hotline in the past 12 months.

Table 14.2 Exposure to and use of HIV prevention services in past 12 months among male to female transgenders, the HIV Testing Survey, San Francisco, June 2002- October 2002

	Number	%
Total	**153**	
Sexual Behaviors		
Abstained from any sexual activity	24	16%
Reported sexual activity	129	84%
Of these: abstained from anal sex	*19*	*15%*
Of these: avoided ejaculation during sex	*30*	*23%*
Reported receptive anal intercourse	106	69%
Of these: always used condoms	*52*	*49%*
Of these: partners intentionally avoided ejaculation	*28*	*26%*
Reported insertive anal intercourse	47	31%
Of these: always used condoms	*32*	*68%*
Of these: intentionally avoided ejaculation	*9*	*19%*
Needle Exchange Use		
Injected drugs in past 12 months	60	39%
Of these: used a needle exchange to obtain clean needles	*23*	*38%*
Knowledge and Use of HIV Prevention Services		
Used any HIV prevention service	151	99%
Actively sought prevention services	118	77%

15 HIV/AIDS among Homeless Persons

AIDS surveillance data

Information on homelessness among persons diagnosed with AIDS has been collected since 1990. A case is classified as homeless if, at the time of AIDS diagnosis, the medical record states that the patient is homeless or the patient's address is a known homeless shelter or a health care clinic or a free postal address not connected to a residence ('general delivery'). Persons for whom information on residence is missing are not classified as homeless. The proportion of homeless AIDS cases increased between 1995 and 2002, and declined between 2002 and 2004 (Figure 15.1). For 2004, 10% of AIDS cases were homeless at the time of diagnosis, down from 12% the previous year.

Compared to the total number of AIDS cases diagnosed between 1995 and 2004, homeless persons with AIDS were more likely to be women, African American, injection drug users (including MSM IDU), and younger (Table 15.1).

Figure 15.1 Number and percent of homeless AIDS cases by year of diagnosis, San Francisco, 1995-2004

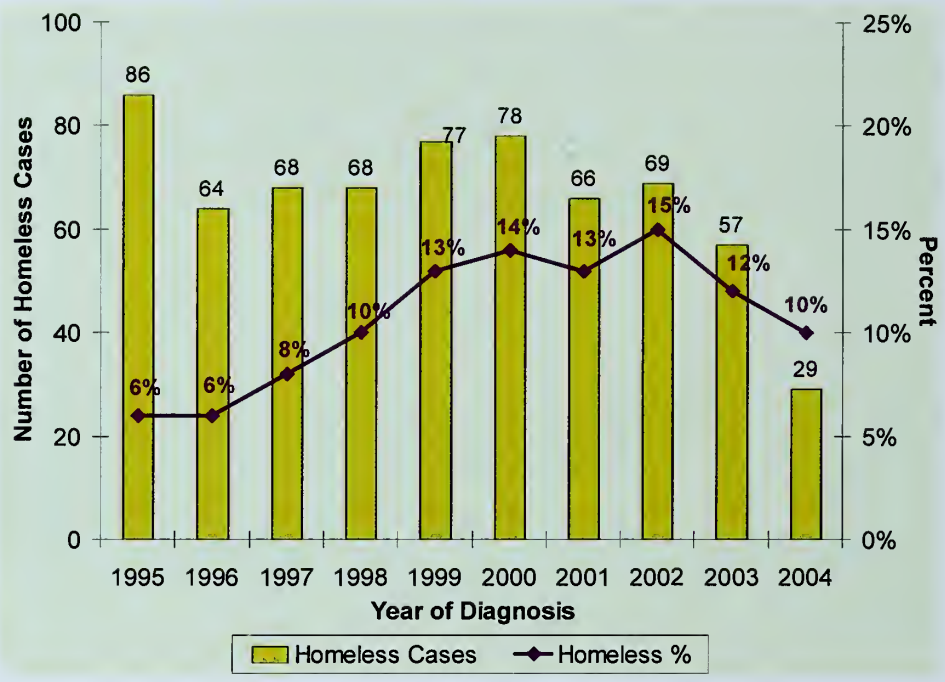


Table 15.1 Characteristics of homeless AIDS cases and AIDS cases diagnosed between 1995 and 2004, San Francisco

	Homeless AIDS Diagnosed 1995-2004 (N=662)	AIDS Cases Diagnosed 1995-2004 (N=6,981)
Gender		
Male	86%	93%
Female	14%	7%
Race/Ethnicity		
White	43%	62%
African American	39%	18%
Latino	16%	15%
Other	3%	5%
Exposure Category		
MSM	22%	67%
IDU	43%	13%
MSM IDU	31%	15%
Heterosexual	3%	2%
Other	2%	2%
Age at Diagnosis		
0 - 19	1%	<1%
20 - 29	15%	10%
30 - 39	40%	42%
40 - 49	34%	33%
50+	11%	14%

REACH study

A cohort study "Research in Access to Care in the Homeless" (REACH) was conducted by the San Francisco General Hospital and the University of California at San Francisco to recruit and follow HIV-infected homeless persons in San Francisco (Reference). A total of 452 homeless persons have been recruited since 1996; of these, 166 died or were lost-to-follow-up as of December 31, 2004. The majority of REACH participants were male (76%), African American (47%), MSM IDU (39%), and 40-49 years old (53%) (Table 15.2). Compared to living HIV/AIDS cases that were homeless at the time of diagnosis, REACH participants were more likely to be African American, older, and less likely to be Latino and heterosexual injection drug users.

Table 15.2 Characteristics of living homeless HIV/AIDS cases and REACH study participants, San Francisco, December 2004

	Living Homeless HIV/AIDS Cases (N=941)	REACH Participants (N=452)
Gender		
Male	77%	76%
Female	16%	14%
Transgender	7%	10%
Race/Ethnicity		
White	42%	40%
African American	38%	47%
Latino	15%	8%
API/Native American	4%	5%
Exposure Category		
MSM	25%	22%
IDU	37%	24%
MSM IDU	30%	39%
Other	4%	11%
Unknown	4%	4%
Age as of 12/31/04*		
13 - 29	10%	3%
30 - 39	28%	20%
40 - 49	41%	53%
50 +	21%	24%

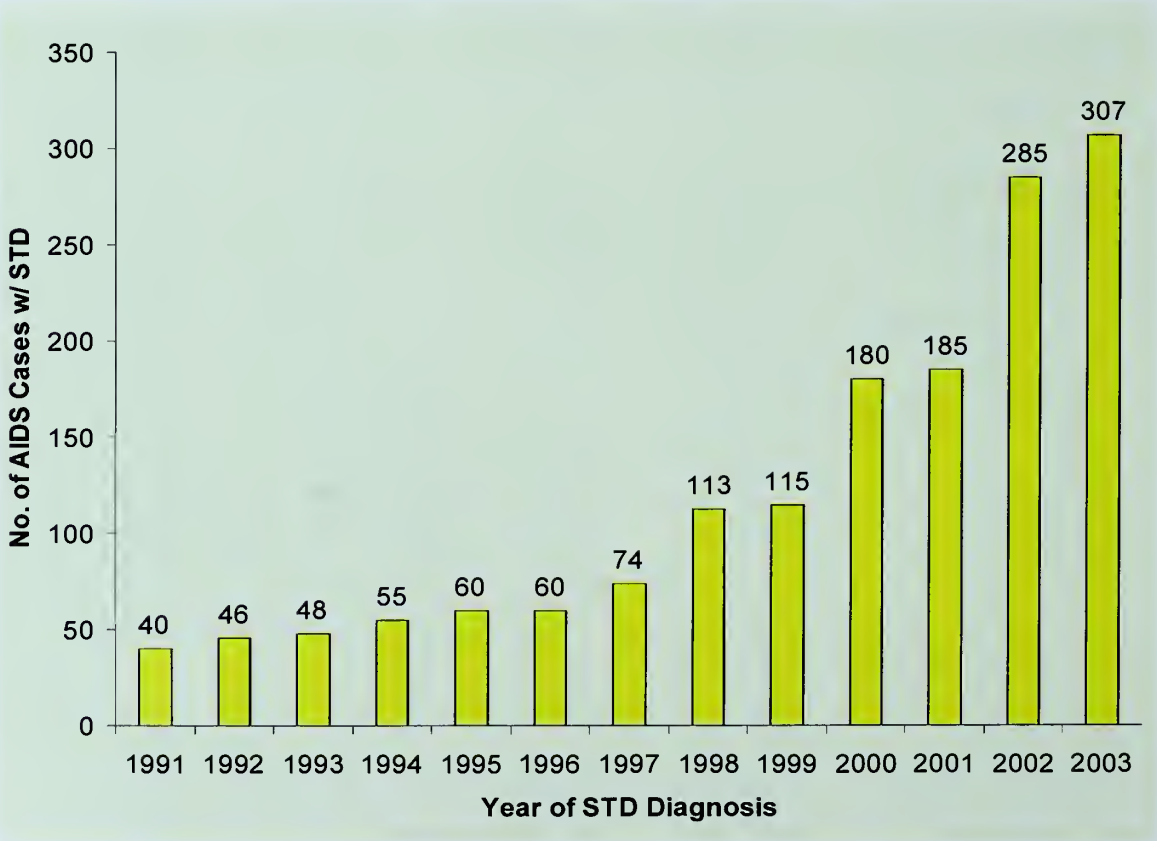
* Age was calculated among 286 REACH participants known to have survived through December 2004.

Reference: Riley ED, et al. Antiretroviral therapy, hepatitis C virus, and AIDS mortality among San Francisco's homeless and marginally housed. *J Acquir Immune Defic Syndr* 2005;38:191-195

16 Sexually Transmitted Diseases among Persons with AIDS

Diagnosis of sexually transmitted diseases (STD) occurring among persons with AIDS was determined through a computerized match of the AIDS and STD case registries through 2003. A match was verified by name, date of birth, and gender. The STD registry included persons reported with gonorrhea, chlamydia, non-gonococcal urethritis, or infectious syphilis. Cases of STDs among persons with AIDS have steadily risen since 1991 with a dramatic jump in 2002 (Figure 16.1). This jump in STDs among persons with AIDS could be expected due to the steep increases in male rectal gonorrhea (see Figure 8.14) and syphilis (see Figure 8.15), particularly among MSM, reported in 2002. All STDs occurred after the AIDS diagnosis, indicating unprotected sex among persons known to be HIV-infected.

Figure 16.1 Number of AIDS cases diagnosed with an STD by year of STD diagnosis, San Francisco, 1991-2003



17 Late HIV Testing

Highly active antiretroviral therapy (HAART) can delay progression of HIV infection to AIDS. Although HAART has been widely available in San Francisco since 1996, HIV-infected persons in San Francisco continue to develop AIDS. HIV testing late in the course of HIV infection may explain why some persons develop AIDS. We examined HIV testing histories of persons diagnosed with AIDS in San Francisco between 2001 and 2004 to determine the extent and sociodemographic and risk characteristics of late testing. Overall, 40% of persons diagnosed with AIDS between 2001 and 2004 had their first HIV test within 12 months of their AIDS diagnosis. Late testing for HIV was more frequent among younger persons, persons of color, and heterosexuals or those without a reported risk. Late testing was less frequent among those with public health insurance. Nearly 38% of the homeless AIDS cases diagnosed in these years were late testers.

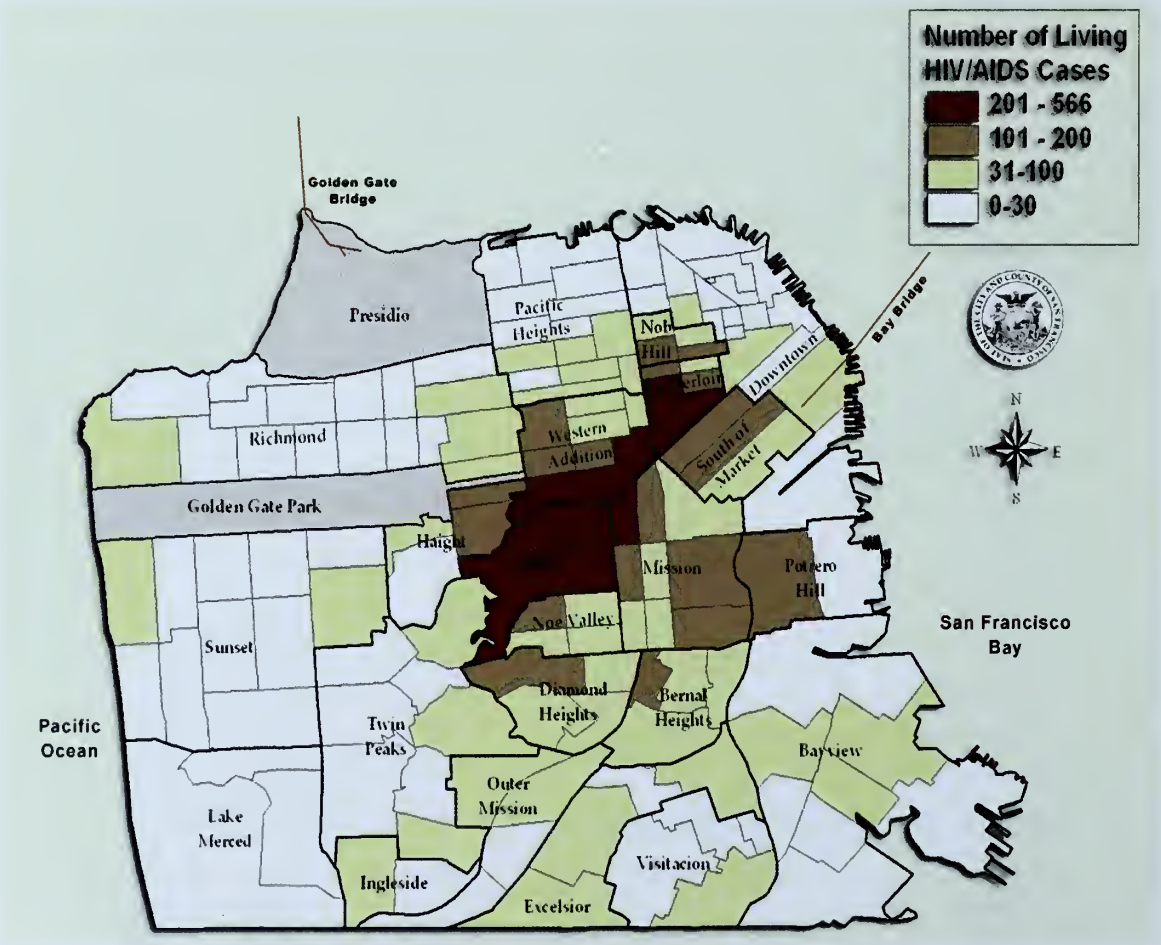
Table 17.1 Characteristics of late HIV testers, San Francisco, 2001-2004

Characteristic	Total Number	Late tester Number	(%)
Total	**1,669**	**668**	(40.0)
Age group (years)			
13-29	143	85	(59.4)
30-39	630	241	(38.3)
40-49	585	219	(37.4)
50+	311	123	(39.5)
Race/Ethnicity			
White	920	326	(35.4)
African American	322	137	(42.5)
Latino	307	143	(46.6)
Other	120	62	(51.7)
Risk group			
MSM	1,071	438	(40.9)
IDU	245	92	(37.6)
MSM IDU	250	67	(26.8)
Heterosexual	52	32	(61.5)
No reported risk	49	38	(77.6)
Insurance at time of AIDS diagnosis			
Public	397	111	(28.0)
Private	638	263	(41.2)
None	595	277	(46.6)
Unknown	39	17	(43.6)
Homeless at time of AIDS diagnosis	216	81	(37.5)

18 Geographic Distribution of HIV/AIDS

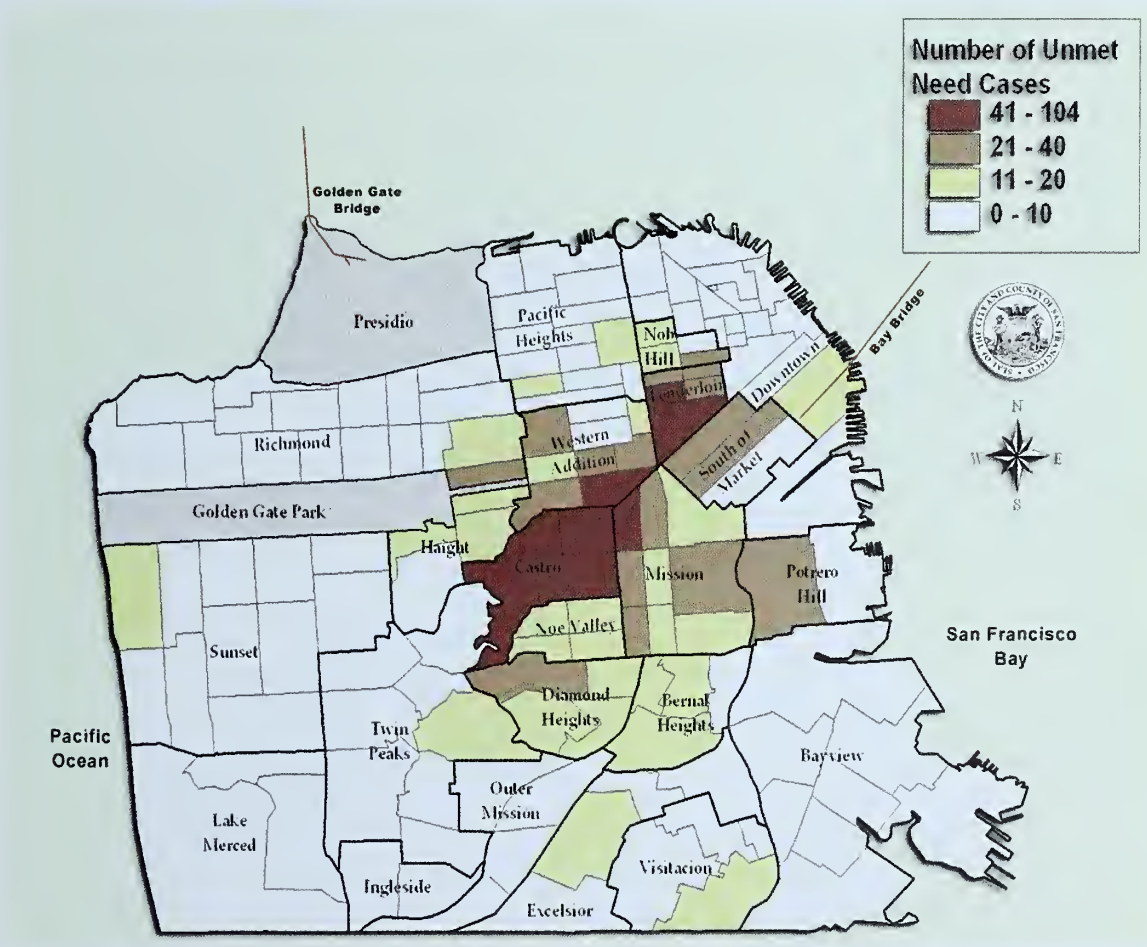
Map 18.1 shows the geographic distribution of persons living with HIV/AIDS by US Census Tract in San Francisco City and County. Data include persons who were residents of San Francisco at the time of either their HIV or AIDS diagnosis and who were known to be alive on December 31, 2004. The most severely affected neighborhoods are the Castro, Tenderloin, Western Addition and Mission. The adjacent areas including South of Market, Nob Hill, Haight Ashbury, Noe Valley, Diamond Heights and Bernal Heights also have large numbers of persons living with HIV/AIDS.

Map 18.1 Distribution of persons living with HIV/AIDS, San Francisco, December 2004



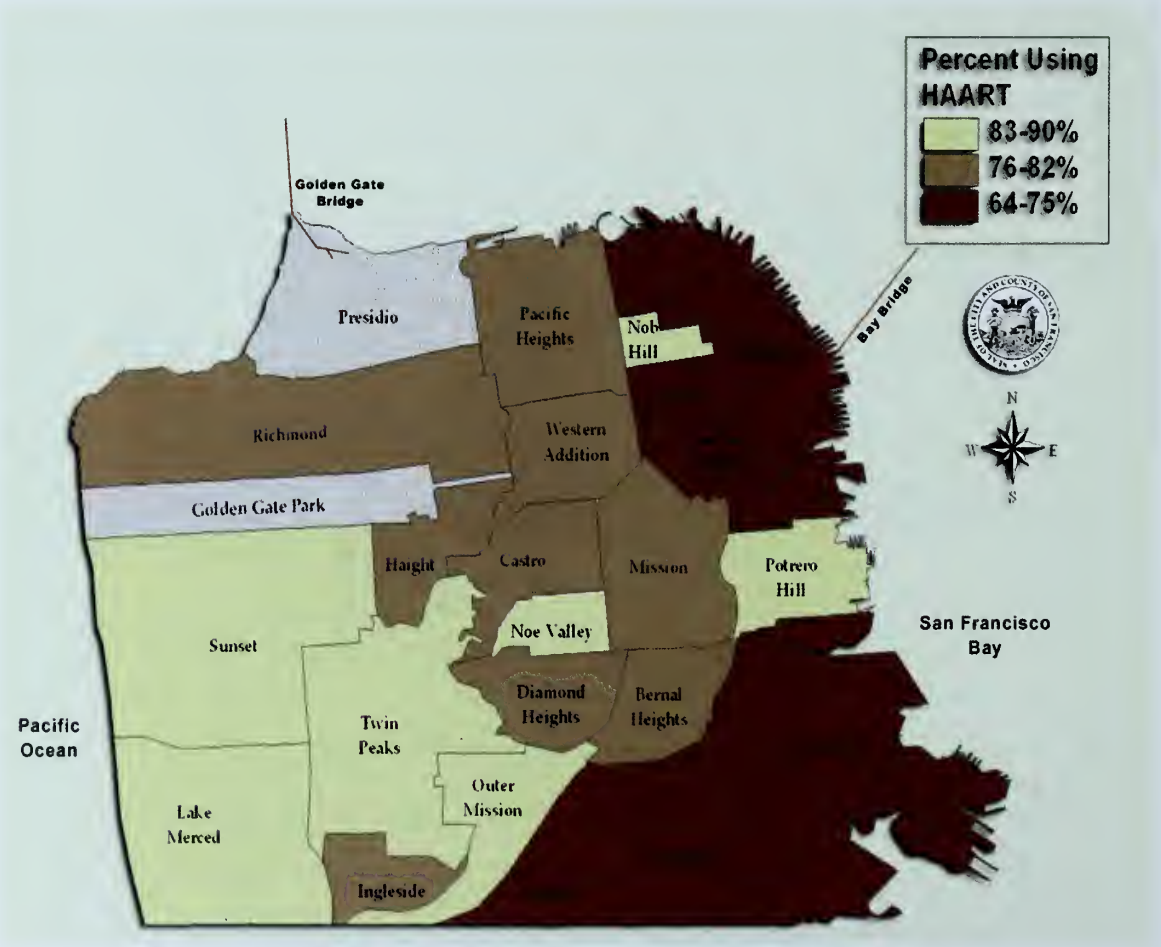
Map 18.2 shows the geographic distribution of unmet need for medical care among persons living with HIV/AIDS by US Census Tract in San Francisco City and County. Data include persons who were residents of San Francisco at the time of either their HIV or AIDS diagnosis and who were known to be alive on December 31, 2003. Persons were classified as having unmet need for medical care if they did not receive a CD4 or viral load test or antiretroviral therapy during 2003. This information was collected from routine laboratory reporting and chart reviews and was not available for persons who were lost to follow-up. The most severely affected neighborhoods are the Castro, Tenderloin, Western Addition and Mission. A high number of HIV/AIDS cases with unmet need is also evident in the adjacent areas of Nob Hill, South of Market, Diamond Heights, and part of Richmond.

Map 18.2 Distribution of HIV/AIDS cases with unmet need for medical care in 2003, San Francisco



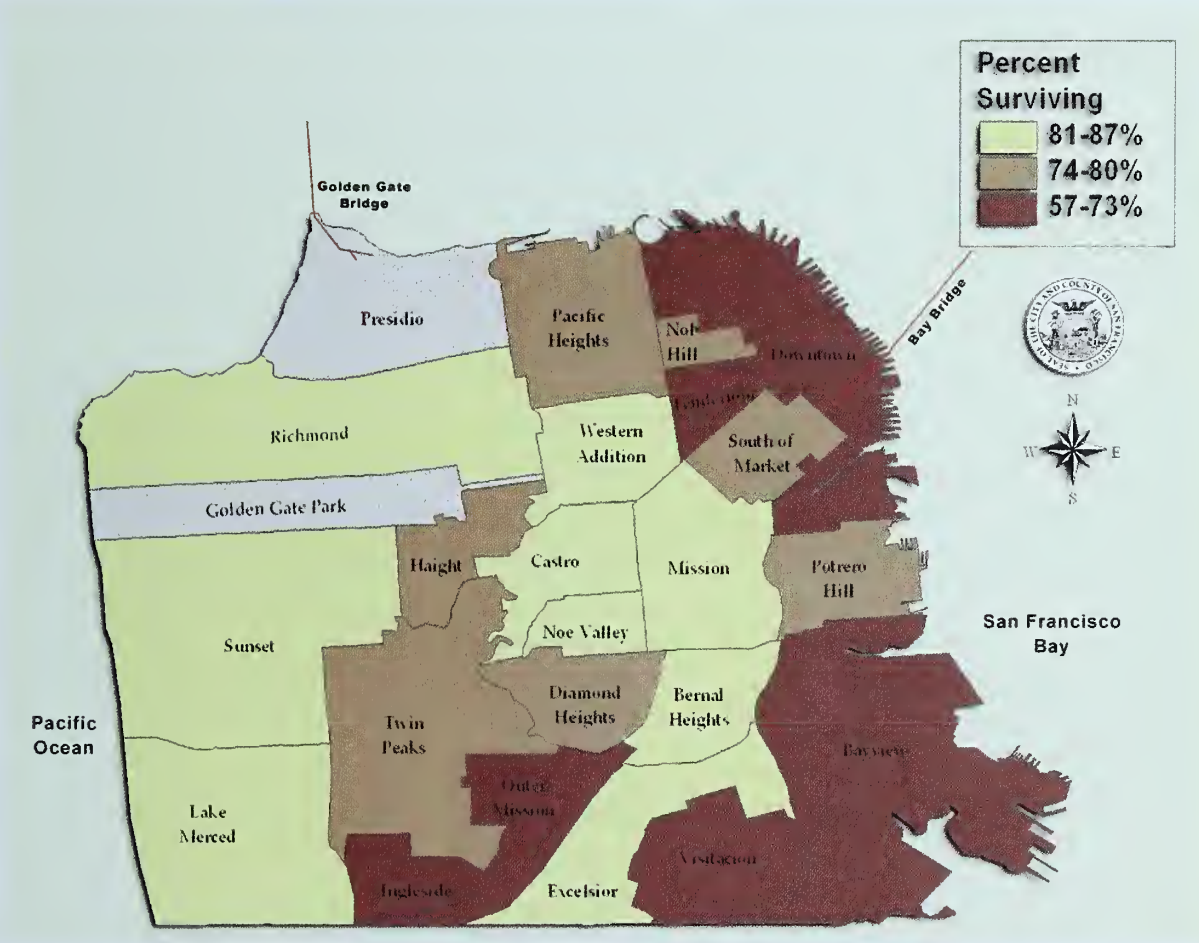
Use of highly active antiretroviral therapies (HAART) was assessed among persons diagnosed with AIDS between 1996 and 2004 including only residents of San Francisco at the time of their AIDS diagnosis. HAART use was proportionately lower in neighborhoods in the eastern part of the city including Downtown, the Tenderloin, South of Market, Bayview, Visitacion and Excelsior with 64% to 75% using HAART. Nob Hill, Potrero Hill, Noe Valley, the Outer Mission, Twin Peaks, Sunset and Lake Merced had the highest percent of HAART use at 83% to 90%.

Map 18.3 **Use of HAART among persons diagnosed with AIDS by neighborhood, San Francisco, 1996-2004**



Map 18.4 shows the proportion of persons that survived at least five years after their AIDS diagnosis by neighborhood. Data include persons who were diagnosed with AIDS between 1996 and 2004 and who were residents of San Francisco at the time of diagnosis. The survival time is estimated using data on the period from AIDS diagnosis to death or to the last date a person was documented to be living. In the Western Addition, Castro, Noe Valley, Mission, Bernal Heights, Excelsior, Richmond, Sunset and Lake Merced, 81% to 87% of persons with AIDS survived for at least five years after diagnosis. In contrast, in the southeast and northeast parts of the city including the neighborhoods of Ingleside, the Outer Mission, Visitacion, Bayview, Downtown and the Tenderloin, 57% to 73% of people survived for at least five years after diagnosis.

Map 18.4 Survival among persons diagnosed with AIDS by neighborhood, San Francisco, 1996-2004



Technical Notes

AIDS Incidence Rates

Annual race-specific rates are calculated as the number of cases diagnosed for a particular race/ethnic group during each year divided by the population for that race/ethnicity, multiplied by 100,000. These rates are calculated separately for males and females. The annual populations are not available for transgenders. Population denominators for the years 1995-2004 are obtained from the State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 1990-1999 and 2000-2050 data files, May 2004 (www.dof.ca.gov).

AIDS Survival

Survival was calculated as the time between the date of initial AIDS diagnosis and the date of death. This includes persons with low CD4 (count<200 or percent<14%) and persons diagnosed with AIDS opportunistic illnesses. The follow-up information of cases was obtained through retrospective and prospective reviews of laboratory records and medical charts. Dates of death were obtained through review of local death certificates, reports from the State Office of AIDS, and matches with the National Death Index (NDI). The most recent NDI match included deaths that occurred through December 31, 2002. Persons not known to have died were censored at the date of their last known follow-up or at December 31, 2002, whichever was more recent.

Causes of Death

Cause of death information on death certificates is coded using the International Classification of Diseases, 10th revision (ICD-10) for deaths occurring in 1999 or after, and the 9th revision (ICD-9) for deaths occurring prior to 1999. These codes are then processed and evaluated using a computer system to determine the underlying and contributory causes of death (www.cdc.gov/nchs/about/major/dvs/im.htm). We obtained the ICD coded causes of death from the California multiple-cause-of-death computer tape for persons with AIDS who died prior to 1996. For AIDS deaths that occurred in 1996 and after, the cause of death information was obtained through the match with the National Death Index. Deaths attributable to HIV infection or AIDS are coded as 042-044 under ICD-9 and B20-B24 under ICD-10. In addition, the AIDS opportunistic illnesses, if listed on death certificates, are included in the category of 'HIV/AIDS' cause of death.

Grouping of Data Categories

Data regarding certain racial/ethnic or risk categories are grouped together when the number of persons with HIV/AIDS in that particular group is small and/or does not present significant trends. For example, "Other" in the Race/Ethnicity breakdown represents Asian/Pacific Islander and Native American; "Other" in the Exposure Category breakdown includes transfusion, hemophilia, heterosexual, perinatal AIDS, or persons of unidentified risk.

National Behavioral Surveillance

In 2003, the CDC initiated a national behavioral surveillance system in the largest US metropolitan areas. Each year, a survey will be conducted among one of the populations at highest risk for HIV. In 2003-2004, MSM were surveyed using a Time-Space Sampling methodology. The methodology entails construction of a list of venues (e.g., gay bars, dance clubs, parks, neighborhoods, etc.) where MSM are concentrated in high numbers for four hour time periods. Using this list, venues are selected at random and four hour time periods are selected for recruitment of MSM. Persons attending the venues are approached, assessed for eligibility, and invited to participate in an anonymous survey on HIV-related behavior. A sub-sample was also invited to test for HIV. Limitations of the approach include potential selection biases in who attends the venues and who elects to do the survey.

Transgender Status

In September 1996, the San Francisco Department of Public Health began noting transgender status when this information is contained in the medical record. Transgender individuals are listed as either male-to-female or female-to-male. Please note that there are several limitations to our transgender data. We believe that our report likely underestimates the number of transgender persons affected by HIV/AIDS because data collected for HIV/AIDS reporting are derived from the medical record. Consequently, information that may be discussed with the health care provider but not recorded in the medical record is generally not available for the purposes of HIV/AIDS case reporting. Because information about transgender status was not collected in a uniform way until September 1996, we have limited data on transgender prior to this, and therefore cannot perform valid time trend analysis for this group.

Treatments

The type and starting date of HIV antiretroviral therapy is obtained at the time of initial case report and through prospective reviews of medical records. Persons noted to have received a protease inhibitor or a nonnucleoside reverse transcriptase inhibitor were considered to have received highly active antiretroviral therapy (HAART). Use of HIV therapies among persons living with AIDS by year was calculated as the number of persons who were not known to have died at the end of each year and who started the treatment prior to or during that year, divided by the total number of persons living with AIDS at the end of each year. Use of HAART among persons living with AIDS by gender, race/ethnicity, and risk was calculated as the number of persons living with AIDS as of December 31, 2004, for each gender, race/ethnicity, or risk group who were noted to have ever received HAART, divided by the total number of persons living with AIDS as of December 31, 2004, for each gender, race/ethnicity, and risk group. Persons whose medical records or treatment information were not available were excluded.

D Data Tables

Figure 1.1 AIDS cases, deaths, and prevalence, San Francisco, 1980-2004 3

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Cases	3	26	99	275	556	860	1236	1630	1762	2159	2047	2280	2329
Deaths	0	8	32	112	272	531	807	877	1036	1272	1362	1495	1633
Persons Living with AIDS	3	21	88	251	535	864	1293	2046	2772	3659	4344	5129	5825

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Cases	2080	1787	1561	1080	807	686	579	544	496	463	470	295
Deaths	1584	1584	1475	982	413	395	352	340	319	311	215	203
Persons Living with AIDS	6321	6524	6610	6708	7102	7393	7620	7824	8001	8153	8408	8500

Figure 2.1 Number of AIDS cases by race/ethnicity, San Francisco, 1995-2004 8

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White	1074	675	516	440	341	315	288	276	230	161
African American	228	194	146	140	104	111	99	81	98	51
Latino	191	160	110	77	103	85	69	72	103	70
Other	68	51	35	29	31	33	40	34	39	13

Figure 2.2 Male annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1995-2004 9

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White	594	367	282	232	178	159	146	141	117	81
African American	545	426	351	340	237	262	247	216	253	123
Latino	322	251	172	125	158	124	105	104	148	99
Other	56	39	24	21	22	23	27	22	28	9

Figure 2.3 Female annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1995-2004 9

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White	12	13	6	11	8	11	8	6	5	4
African American	115	115	81	86	75	71	69	43	60	44
Latina	16	28	16	6	14	17	8	9	9	13
Other	5	2	5	2	3	1	3	2	2	0

Figure 2.4 Number of male AIDS cases by exposure category, San Francisco, 1995 - 2004 10

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MSM	1114	713	552	437	354	328	302	294	295	192
IDU	106	91	79	61	49	56	44	39	60	17
MSM IDU	226	145	95	115	89	77	70	70	44	39
Other	20	22	12	7	21	12	25	13	16	10

Figure 2.5 Number of female AIDS cases by exposure category, San Francisco, 1995-2004 10

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
IDU	50	53	31	33	35	35	27	18	23	20
Heterosexual	14	19	14	13	11	14	9	9	9	5
Other	10	3	5	4	2	2	6	4	2	2

Figure 7.1 Trends in insurance status among persons with AIDS by gender, San Francisco, 1999-2004 23

Male	1999	2000	2001	2002	2003	2004
Public	13%	16%	18%	20%	21%	22%
Private	39%	41%	42%	42%	43%	45%
None	42%	38%	35%	35%	36%	31%

Female	1999	2000	2001	2002	2003	2004
Public	63%	55%	60%	32%	59%	70%
Private	13%	14%	17%	13%	9%	4%
None	21%	25%	19%	48%	29%	26%

Transgender	1999	2000	2001	2002	2003	2004
Public	22%	40%	31%	25%	33%	50%
Private	6%	5%	0%	13%	5%	0%
None	61%	50%	69%	56%	57%	50%

Figure 8.1 AIDS cases, deaths, and prevalence among MSM, San Francisco, 1995 - 2004 25

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Cases	1361	891	665	568	461	423	385	380	360	241
Deaths	1335	858	337	319	281	276	246	237	160	151
Persons Living with AIDS	5857	5890	6218	6467	6647	6794	6933	7076	7276	7366

Figure 8.2 AIDS cases among MSM by race/ethnicity, San Francisco, 1995-2004 . .25

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White	1015	609	471	397	297	277	254	247	196	149
African American	122	111	76	75	55	51	46	40	49	23
Latino	168	127	92	71	83	68	55	64	87	58
Other	56	44	26	25	26	27	30	29	28	11

Figure 8.3 Percent of MSM reporting unprotected anal intercourse by self-reported HIV status in the last six months, the Stop AIDS Project, San Francisco, 1998-2004 26

	1998	1999	2000	2001	2002	2003	2004
HIV Positive	38%	42%	46%	51%	45%	53%	54%
HIV Negative	34%	32%	36%	37%	32%	37%	33%

Figure 8.4 Percent of MSM reporting unprotected anal intercourse with at least one partner of unknown HIV status in the last six months, the Stop AIDS Project, San Francisco, 1998-2004 26

	1998	1999	2000	2001	2002	2003	2004
HIV Positive	22%	25%	25%	31%	27%	28%	21%
HIV Negative	12%	15%	17%	20%	16%	8%	4%

Figure 8.15 Syphilis among MSM, San Francisco, 1997-2004 37

	1997	1998	1999	2000	2001	2002	2003	2004
Primary	2	3	3	13	44	96	105	115
Secondary	15	2	19	27	72	190	209	206
Early Latent	3	4	10	12	38	151	158	171

Figure 9.1 AIDS cases, deaths, and prevalence among non-MSM IDU, San Francisco, 1995 - 2004 38

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Cases	156	145	110	94	84	93	71	57	83	37
Deaths	106	102	62	65	64	51	60	60	47	38
Persons Living with AIDS	587	630	678	707	727	769	780	777	813	812

Figure 9.2 AIDS cases among non-MSM IDU by race/ethnicity, San Francisco, 1995 - 2004 38

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White	47	54	38	36	37	33	29	22	31	9
African American	88	70	56	52	39	49	35	32	35	22
Latino	12	16	12	5	5	8	5	2	13	6
Other	9	5	4	1	3	3	2	1	4	0

Figure 10.1 AIDS cases, deaths, and prevalence among heterosexuals, San Francisco, 1995-2004 40

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Cases	19	25	18	14	17	18	15	14	13	11
Deaths	14	9	9	3	4	4	8	9	5	6
Persons Living with AIDS	85	101	110	121	134	148	155	160	168	173

Figure 10.2 AIDS cases among heterosexuals by race/ethnicity, San Francisco, 1995-2004 40

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White	6	4	4	5	3	3	2	4	2	3
African American	7	10	7	8	7	9	8	5	9	2
Latino	6	10	4	0	6	5	2	2	1	5
Other	0	1	3	1	1	1	3	3	1	1

Figure 10.4 HIV prevalence rate among blood donations and donors through 2004, San Francisco Bay Area 42

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
HIV prevalence rate per 100,000 donations	111	45	33	26	11	13	10	8	4	7	5

	1996	1997	1998	1999	2000	2001	2002	2003	2004
HIV prevalence rate per 100,000 donations	3	6	5	2	2	1	4	6	2
HIV prevalence rate per 100,000 donors				4	4	2	7	10	3

Figure 11.1 AIDS cases, deaths, and prevalence among women, San Francisco, 1995-2004 44

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Cases	74	75	50	50	48	51	42	31	34	27
Deaths	41	47	24	23	33	25	26	29	20	13
Persons Living with AIDS	315	343	369	396	411	437	453	455	469	483

Figure 11.2 Female AIDS cases by race/ethnicity, San Francisco, 1995-2004 44

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White	20	20	9	17	13	18	13	10	8	7
African American	40	39	27	28	24	22	21	13	18	13
Latina	8	14	8	3	7	9	4	5	5	7
Other	6	2	6	2	4	2	4	3	3	0

Figure 13.2 Infants born to HIV-infected mothers by year of birth and infant HIV status, San Francisco, 1994-2004 49

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
HIV Infected	5	4	1	0	2	1	0	0	2	1	1
Seroreverted	10	13	9	10	8	8	11	16	8	16	6
Status Unknown	1	0	0	0	2	0	0	0	0	0	0



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Contents

Contents i
List of Figures and Tables ii
Dear Colleague Letter vi
Executive Summary vii
1. Overview of HIV/AIDS in San Francisco 1
2. Trends in AIDS Incidence 7
3. Survival among Persons with AIDS 11
4. Trends in AIDS Mortality 13
5. Persons Living with HIV/AIDS 17
6. Use of Antiretroviral Therapy among Persons with AIDS 19
7. Insurance Status at Time of AIDS Diagnosis 20
8. HIV/AIDS among Men Who Have Sex with Men 21
9. HIV/AIDS among Injection Drug Users 28
10. HIV/AIDS among Heterosexuals 31
11. HIV/AIDS among Women 34
12. HIV/AIDS among Adolescents and Young Adults 36
13. HIV/AIDS among Children 37
14. HIV/AIDS among Transgender Persons 40
15. HIV/AIDS among Homeless Persons 41
16. Sexually Transmitted Diseases among Persons with AIDS 42
17. Late HIV Testing 43
18. Substance Use 44
19. Geographic Distribution of HIV/AIDS 46
Technical Notes 47
Data Tables 49

List of Figures and Tables

1. Overview of HIV/AIDS in San Francisco

Table 1.1 Characteristics of cumulative AIDS cases in San Francisco, California, and the United States 1

Table 1.2 Cumulative AIDS cases by gender, exposure category, and race/ethnicity, diagnosed through December 2005, San Francisco 2

Figure 1.1 AIDS cases, deaths, and prevalence, San Francisco, 1980-2005 3

Table 1.3 Characteristics of persons reported with HIV non-AIDS, San Francisco, July 2002 - March 2006 4

Table 1.4 Cumulative HIV non-AIDS cases by gender, exposure category and race/ethnicity, reported through March 2006, San Francisco 5

Table 1.5 The 2006 HIV Consensus Estimates: population size, HIV prevalence, and HIV incidence by behavioral risk population, San Francisco 6

2. Trends in AIDS Incidence

Figure 2.1 Number of AIDS cases by race/ethnicity, San Francisco, 1996-2005 7

Figure 2.2 Male annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1996-2005 8

Figure 2.3 Female annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1996-2005 8

Figure 2.4 Number of male AIDS cases by exposure category, San Francisco, 1996-2005 9

Figure 2.5 Number of female AIDS cases by exposure category, San Francisco, 1996-2005 9

Table 2.1 AIDS cases by gender and age at diagnosis, diagnosed 1995-2005, San Francisco 10

3. Survival among Persons with AIDS

Figure 3.1 Proportion surviving five years for persons diagnosed with AIDS in 1980-1989, 1990-1995, and 1996-2005, San Francisco 11

Figure 3.2 Proportion surviving five years for persons diagnosed with AIDS between 1996 and 2005 by race/ethnicity, exposure category, and gender, San Francisco 12

4. Trends in AIDS Mortality

Table 4.1 Deaths in persons with AIDS, by gender, race/ethnicity, and exposure category, San Francisco, 2002-2005 13

Figure 4.1 Death rates due to HIV/AIDS-related and non-HIV/AIDS-related causes among persons with AIDS, San Francisco, 1992-2003 14

Table 4.2 Underlying causes of death among persons with AIDS, San Francisco, 1992-2003 ...15

Table 4.3 Multiple causes of death among persons with AIDS, San Francisco, 1992-2003 16

5. Persons Living with HIV/AIDS

Table 5.1 Persons living with HIV/AIDS by demographic and risk characteristics, San Francisco, 2002-2005 17

Table 5.2 Unmet need by demographic characteristics among persons living with HIV/AIDS, San Francisco, July 2003-June 2004 18

6. Use of Antiretroviral Therapy among Persons with AIDS

Figure 6.1 Use of antiretroviral therapy among persons living with AIDS by gender, race/ethnicity, and exposure category, San Francisco, December 2005 19

7. Insurance Status at Time of AIDS Diagnosis

Figure 7.1 Trends in insurance status among persons with AIDS by gender, San Francisco, 2000-2005 20

Figure 7.2 AIDS cases by gender and insurance status at diagnosis, San Francisco, 2000-2005 ...20

8. HIV/AIDS among Men Who Have Sex with Men

Figure 8.1 AIDS cases, deaths, and prevalence among MSM, San Francisco, 1996-2005 21

Figure 8.2 AIDS cases among MSM by race/ethnicity, San Francisco, 1996-2005 21

Figure 8.3 Percent of MSM reporting unprotected anal intercourse by self-reported HIV status in the last six months, the Stop AIDS Project, San Francisco, 1998-2005 22

Figure 8.4 Percent of MSM reporting unprotected anal intercourse with at least one partner of unknown HIV status in the last six months, the Stop AIDS Project, San Francisco, 1998-2005 22

Table 8.1 Receipt of HIV-related medical care among HIV-infected MSM, Telephone Survey of MSM, 2002 23

Table 8.2 Partnerships among MSM by venue where partnerships were initiated, the National Behavioral Surveillance Survey, San Francisco, 2003-2004 24

Table 8.3 HIV prevalence among MSM by race/ethnicity, the National Behavioral Surveillance Survey, San Francisco, 2003-2004 25

Figure 8.5 Male rectal gonorrhea and male gonococcal proctitis among MSM, San Francisco, 1997-2005 26

Figure 8.6 Syphilis among MSM, San Francisco, 1997-2005 27

9. HIV/AIDS among Injection Drug Users

Figure 9.1 AIDS cases, deaths, and prevalence among non-MSM IDU, San Francisco, 1996-2005 28

Figure 9.2 AIDS cases among non-MSM IDU by race/ethnicity, San Francisco, 1996-2005 28

Table 9.1 Injection drug use-associated AIDS cases by exposure category and race/ethnicity, diagnosed through December 2005, San Francisco 29

Table 9.2 Estimated proportion of injection drug users engaging in risk behaviors, the National Behavioral Surveillance Survey, San Francisco, 2005 30

Table 9.3 Estimated proportion of injection drug users engaging in protective behaviors, the National Behavioral Surveillance Survey, San Francisco, 2005 30

10. HIV/AIDS among Heterosexuals

Figure 10.1 AIDS cases, deaths, and prevalence among heterosexuals, San Francisco, 1996-2005 .31

Figure 10.2 AIDS cases among heterosexuals by race/ethnicity, San Francisco, 1996-2005 31

Table 10.1 AIDS cases among heterosexuals by exposure category and gender, diagnosed through December 2005, San Francisco 32

Figure 10.3 HIV prevalence rate among blood donations and donors through 2005, San Francisco Bay Area 32

Figure 10.4 Syphilis among heterosexual men, San Francisco, 1997- 2005 33

Figure 10.5 Syphilis among women, San Francisco, 1997- 2005 33

11. HIV/AIDS among Women

Figure 11.1 AIDS cases, deaths, and prevalence among women, San Francisco, 1996-2005 34

Figure 11.2 Female AIDS cases by race/ethnicity, San Francisco, 1996-2005 34

Figure 11.3 Female AIDS cases diagnosed through December 2005 and female population by race/ethnicity, San Francisco 35

Figure 11.4 Female AIDS cases diagnosed through December 2005 by exposure category, San Francisco 35

12. HIV/AIDS among Adolescents and Young Adults

Table 12.1 Adolescent and young adult AIDS cases by exposure category, gender, and race/ethnicity, diagnosed through December 2005, San Francisco 36

13. HIV/AIDS among Children

Figure 13.1 Pediatric AIDS cases by year of diagnosis, San Francisco, 1980-2005 37

Table 13.1 Living pediatric AIDS cases by exposure category, gender, and race/ethnicity, diagnosed through December 2005, San Francisco 37

Table 13.2 Infants born to HIV-infected mothers by infant HIV status and race/ethnicity, San Francisco, December 2005 38

Figure 13.2 Infants born to HIV-infected mothers by year of birth and infant HIV status, San Francisco, 1994-2005 39

14. HIV/AIDS among Transgender Persons

Table 14.1 Characteristics of transgender HIV/AIDS cases and cumulative HIV/AIDS cases diagnosed through December 2005, San Francisco 40

15. HIV/AIDS among Homeless Persons

Figure 15.1 Number and percent of homeless AIDS cases by year of diagnosis, San Francisco, 1996-2005 41

Table 15.1 Characteristics of homeless AIDS cases and AIDS cases diagnosed between 1996 and 2005, San Francisco 41

16. Sexually Transmitted Diseases among Persons with AIDS

Figure 16.1 Number of AIDS cases diagnosed with an STD by year of STD diagnosis, San Francisco, 1995-2004 42

17. Late HIV Testing

Table 17.1 Characteristics of late HIV testers, San Francisco, 2001-2005 43

18. Substance Use

Table 18.1 Substance use among MSM, the National Behavioral Surveillance Survey, San Francisco, 2004-2005 44

Figure 18.1 Late Night Breakfast Buffet Survey, San Francisco, 2004 45

19. Geographic Distribution of HIV/AIDS

Map 19.1 Distribution of persons living with HIV/AIDS by neighborhood, San Francisco, December 2005 46

Dear Colleague,

We want to call your attention to a recent change in how we present the San Francisco HIV/AIDS surveillance data. Beginning in 2005, publications of our data were changed to include only persons who were residents of San Francisco at the time they were diagnosed with HIV/AIDS. Prior to this change, our reports also included persons who were diagnosed with HIV/AIDS at a San Francisco medical facility, but who were residents elsewhere at the time of their diagnosis.

We decided to exclude non-San Francisco residents from the data presentations because HIV/AIDS case reporting practices result in our having a complete count of San Francisco residents with HIV/AIDS, but an incomplete record of non-San Francisco residents with HIV/AIDS. In order to provide consistent HIV/AIDS surveillance data, our surveillance quarterly and annual reports include only reports of persons diagnosed with HIV or AIDS who were residents of San Francisco at the time of their diagnosis. Consequently, the numbers in reports from 2005 and later differ from reports published prior to 2005.

You may contact the HIV/AIDS Statistics, Epidemiology, and Intervention Research Section of the San Francisco Department of Public Health at (415) 554-9050 if you have questions concerning our reports.

Thank you for your interest,

The HIV/AIDS Statistics, Epidemiology
and Intervention Research Section Staff

Executive Summary

The HIV epidemic is complex and we cannot rely on a single piece of research to determine infection rates. After reviewing trends from multiple data sources, following a resurgence in HIV incidence beginning in 1995, we see little evidence of continued increases from 2001 to the present. Limited evidence suggests that HIV infection rates have decreased, albeit to a modest degree, from an estimated 1,084 five years ago to 977 this year. While this decrease may be within measurement error, the good news is that the HIV epidemic does not appear to be accelerating in San Francisco. This assessment is based on over 50 data sources and the input of over 75 AIDS researchers, service providers, community members, and epidemiologists. This periodic synthesis of available information on the epidemic, a process we call the "HIV Consensus," was done in 1992, 1997, 2001, and 2006. Results of the 2006 HIV Consensus are presented in Table 1.5 of this report.

Our revised estimates take into account apparent growth in the size of some populations at risk. For example, consider men who have sex with men (MSM). Nine studies converge on an estimated 63,577 MSM (including 5,234 MSM-injection drug users [IDU]) in San Francisco. Yet, growth in the number of MSM has not translated to increased new HIV infections. The projected HIV incidence rate is 21% lower than estimated in 2001. Estimated HIV incidence rates also appear to be lower in MSM-IDU (by 44%), heterosexual male IDU (by 9%), female IDU (by 54%), and very low among heterosexual men and women. Estimates also account for persons living longer with HIV due to antiretroviral therapy. Among persons in care, we see relative stability in current rates of new AIDS diagnoses and deaths, use of antiretroviral therapy, and among patients with respect to gender, race/ethnicity, age, and risk category.

Skeptics of these estimates can correctly point out uncertainties in our data. We must also distinguish a reversal in trend from correction of a wrong conclusion made previously. Most likely, we overshot the estimated number of male-to-female transgendered persons (MTF) and the number of MTF infected in 2001. New data estimate number of MTF at 1,883 (including 449 MTF-IDU), with HIV incidence rates 59% lower for MTF and 61% lower for MTF-IDU. With our epidemic concentrated in hard to reach segments of society, we may be at the limits of our ability to make accurate projections. Nonetheless, with the high concentration of AIDS research in San Francisco, we feel our estimates are as robust as anywhere in the world.

In summary, the current HIV/AIDS epidemic is characterized by no apparent increases in HIV infection rates over the past five years, and with considerable decreases in some populations. A number of factors may account for these trends. San Francisco's community-based prevention and treatment responses deserve some credit, bringing our per capita rate of AIDS incidence down from the highest in America to its present rank as number seven. However, as we have warned in past reports, the present situation provides no cause for complacence. Rates of new HIV infection and morbidity due to AIDS are still unacceptably high. Moreover, the past 25 years have taught us that the epidemic can quickly and profoundly change.

1 Overview of HIV/AIDS in San Francisco

AIDS surveillance data

AIDS surveillance in San Francisco is conducted through a variety of methods and evaluated regularly (see Technical Notes, HIV/AIDS Surveillance Methods). As of December 31, 2005, a cumulative total of 26,609 San Francisco residents were diagnosed with AIDS (Table 1.1). This comprises 19% of California AIDS cases and three percent of cases reported nationally. As of December 2004, San Francisco was ranked third in the cumulative number of AIDS cases and ranked seventh in the AIDS incidence rate in 2004 among metropolitan areas nationwide. Compared to California and the United States as a whole, AIDS cases in San Francisco are more likely to be male, white, and to occur among men who have sex with men (MSM), including MSM who also inject drugs (MSM IDU).

Table 1.1 Characteristics of cumulative AIDS cases in San Francisco, California, and the United States#

	San Francisco (N = 26,609)		California (N = 139,449)	United States (N = 918,286)
	Number	%	%	%
Gender				
Male	25,220	95%	91%	81%
Female	1,054	4%	8%	19%
Transgender*	335	1%	<1%	--
Race/Ethnicity				
White	19,232	72%	57%	40%
African American	3,348	13%	18%	39%
Latino	3,051	11%	22%	18%
Asian/Pacific Islander	811	3%	2%	<1%
Native American	137	1%	<1%	<1%
Other/Unknown	30	<1%	<1%	<1%
Exposure Category				
MSM	19,970	75%	68%	44%
IDU	2,016	8%	10%	24%
MSM IDU	3,863	15%	9%	7%
Heterosexual	348	1%	6%	13%
Transfusion/Hemophilia	167	1%	1%	2%
Other/Unidentified	245	1%	5%	10%

San Francisco data are reported through March 8, 2006 for cases diagnosed through December 2005; California data are reported through December 2005; U.S. data are reported through December 2004.

* Transgender data are not reported by the United States. See Technical Notes "Transgender Status."

In San Francisco, MSM account for the majority of male AIDS cases within all race/ethnic groups (Table 1.2). Among African American men, heterosexual injection drug use is the second most frequent exposure category. Among men of all other race/ethnic groups, MSM IDU represents the second most frequent exposure category and is a particularly prominent exposure category among Native American men. One percent or less of men with AIDS acquired HIV infection through heterosexual contact.

Among women with AIDS, IDU is the most frequent exposure category for white, African American, Latina, and Native American women, followed by heterosexual contact. For Asian/Pacific Islander women, 38% acquired their infection through heterosexual contact, 37% through injection drug use, and 18% through transfusion of blood or blood products.

Injection drug use is prevalent among male to female transgender AIDS cases. Fifty-seven percent of white transgenders, 65% of African American transgenders, and 45% of Latino transgenders were IDU.

Table 1.2 Cumulative AIDS cases by gender, exposure category, and race/ethnicity, diagnosed through December 2005, San Francisco

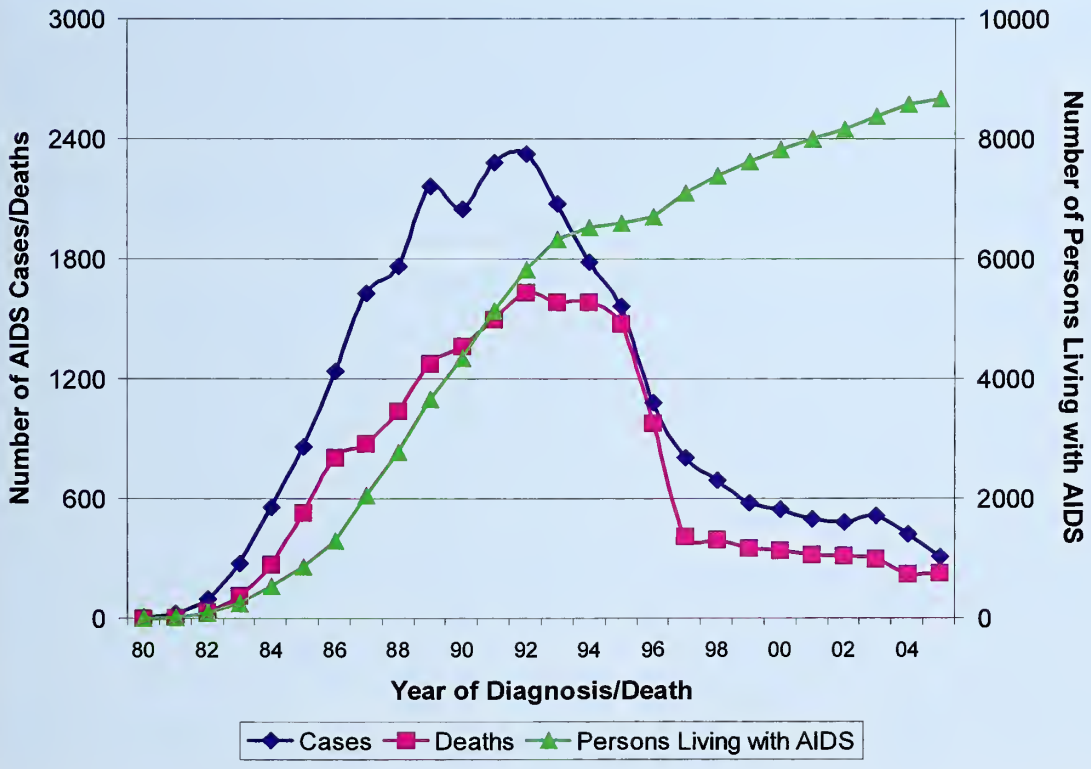
	White		African American		Latino		Asian/Pacific Islander		Native American	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Male										
MSM	15,489	(82)	1,452	(53)	2,195	(78)	609	(84)	63	(52)
IDU	482	(3)	658	(24)	159	(6)	21	(3)	10	(8)
MSM IDU	2,684	(14)	544	(20)	353	(13)	48	(7)	45	(37)
Heterosexual	29	(<1)	35	(1)	20	(1)	7	(1)	1	(1)
Transfusion/ Hemophilia	51	(<1)	17	(1)	22	(1)	14	(2)	0	(0)
Other/Unidentified	51	(<1)	50	(2)	60	(2)	24	(3)	2	(2)
Male Subtotal	**18,786**		**2,756**		**2,809**		**723**		**121**	
Female										
IDU	229	(65)	349	(72)	68	(48)	22	(37)	11	(92)
Heterosexual	80	(23)	97	(20)	52	(37)	23	(38)	1	(8)
Transfusion/ Hemophilia	29	(8)	13	(3)	10	(7)	11	(18)	0	(0)
Other/Unidentified	14	(4)	27	(6)	11	(8)	4	(7)	0	(0)
Female Subtotal	**352**		**486**		**141**		**60**		**12**	
Transgender* (Male to Female Only)										
IDU	54	(57)	69	(65)	45	(45)	#	(39)	#	(75)
Non IDU	40	(43)	37	(35)	55	(55)	#	(61)	#	(25)
Transgender Subtotal	**94**		**106**		**100**		**#**		**#**	

* See Technical Notes "Transgender Status."

\# Data not released due to potential small population size.

The number of new AIDS cases diagnosed among San Francisco residents peaked in 1992 at 2,327 (Figure 1.1). There was a slight increase in the number of new AIDS cases between 2002 and 2003. Delays in reporting affect the number of cases for recent years; therefore, the numbers of cases for 2004 and 2005 may be revised upward in future reports. Deaths among persons with AIDS reached a plateau between 1992 and 1995, and declined thereafter. The sharpest decline in AIDS deaths occurred between 1995 and 1997, reflecting the impact of effective combination antiretroviral therapies. By the end of 2005, there were 8,666 San Francisco residents living with AIDS. Of note, mortality data for 2004 and 2005 is not yet complete.

Figure 1.1 AIDS cases, deaths, and prevalence, San Francisco, 1980-2005



HIV non-AIDS case reporting data

The reporting of HIV non-AIDS cases was initially implemented in California on July 1, 2002 using a non-name code. On April 17, 2006, a new law (Senate Bill 699) requiring HIV reporting by name was enacted and the new reporting requirement took effect immediately. The HIV reporting system is a dual reporting system which requires both the health care providers to report their HIV-infected patients and the laboratories to report tests indicative of HIV infection, including confirmed HIV positive antibody tests and all viral load test results. Detailed information regarding California's HIV reporting regulations can be found at the California Department of Health Services website: www.dhs.ca.gov/AIDS/HIVreporting.

HIV reporting data are not complete and have not been fully evaluated for accuracy. In addition, persons who are infected with HIV but have not been diagnosed are not included. Data presented here reflects persons diagnosed and reported with HIV among San Francisco residents using the non-name reporting system. For comparison, living AIDS cases as of December 31, 2005 are also presented.

Between July 2002 and March 2006, a total of 6,188 HIV non-AIDS cases among San Francisco residents were reported. The majority of these cases (67%) were known to be diagnosed prior to the implementation of HIV reporting (Table 1.3). Compared to HIV non-AIDS cases diagnosed before July 1, 2002, cases diagnosed on or after July 1, 2002 had higher percentages of people of color as well as persons with no risk information. Demographic and risk characteristics of HIV non-AIDS cases diagnosed before July 1, 2002 are similar to those for living AIDS cases.

Table 1.3 Characteristics of persons reported with HIV non-AIDS, San Francisco, July 2002 - March 2006

	Diagnosed* before 7/1/02		Diagnosed* after 7/1/02		Living AIDS cases (as of 12/31/2005)	
	Number	%	Number	%	Number	%
Total	**4,166**	**100%**	**2,022**	**100%**	**8,666**	**100%**
Gender						
Male	3,851	92%	1,813	90%	7,992	92%
Female	247	6%	154	7%	495	6%
Transgender	68	2%	55	3%	179	2%
Race/ethnicity						
White	2,829	68%	1,089	54%	5,698	66%
African American	601	14%	328	16%	1,211	14%
Latino	472	11%	342	17%	1,304	15%
Asian/Pacific Islander	155	4%	120	6%	385	4%
Native American	27	<1%	25	1%	50	<1%
Other/Unknown	82	2%	118	6%	18	<1%
Exposure Category						
MSM	3,096	74%	1,325	66%	6,318	73%
IDU	337	8%	179	9%	797	9%
MSM IDU	415	10%	189	9%	1,206	14%
Heterosexual	82	2%	67	3%	189	2%
Other	18	<1%	4	<1%	40	<1%
No Reported Risk	218	5%	258	13%	116	1%

* HIV diagnosis date is based on the earliest date of antibody test, patient self-report of HIV infection, CD4, viral load test, or use of antiretroviral therapy.

As in AIDS cases, MSM account for the majority of male HIV non-AIDS cases within all race/ethnic groups (Table 1.4). Among African American men, heterosexual injection drug use is the second most frequent exposure category. MSM IDU represent the second most frequent exposure category among white, Latino, and Native American men.

Injection drug use is the most frequent exposure category among white, African American, Latina, and Native American women with HIV non-AIDS, followed by heterosexual contact. Among Asian/Pacific Islander women, heterosexual contact was the most frequent exposure category.

Among male to female transgender HIV non-AIDS cases, 43% of whites, 47% of African Americans, and 38% of Latinos were IDU.

Compared to AIDS cases, larger proportions of HIV non-AIDS cases are reported without risk information. This is due, in part, to reporting HIV non-AIDS cases by a non-name code which resulted in the inability to follow up and obtain complete case information.

Table 1.4 **Cumulative HIV non-AIDS cases by gender, exposure category and race/ethnicity§, reported through March 2006, San Francisco**

	White		African American		Latino		Asian/Pacific Islander		Native American	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Male										
MSM	3,093	(82)	356	(52)	597	(81)	210	(86)	19	(53)
IDU	152	(4)	126	(18)	28	(4)	8	(3)	5	(14)
MSM IDU	372	(10)	101	(15)	50	(7)	8	(3)	11	(31)
Heterosexual	9	(<1)	18	(3)	12	(2)	2	(1)	0	(0)
Other	5	(<1)	2	(<1)	4	(<1)	1	(<1)	0	(0)
No Reported Risk	154	(4)	83	(12)	43	(6)	15	(6)	1	(3)
Male Subtotal	**3,785**		**686**		**734**		**244**		**36**	
Female										
IDU	63	(57)	90	(48)	20	(37)	5	(28)	9	(75)
Heterosexual	19	(17)	51	(27)	17	(31)	11	(61)	3	(25)
Other	3	(3)	4	(2)	0	(0)	1	(6)	0	(0)
No Reported Risk	25	(23)	43	(23)	17	(31)	1	(6)	0	(0)
Female Subtotal	**110**		**188**		**54**		**18**		**12**	
Transgender* (Male to Female Only)										
IDU	10	(43)	26	(47)	10	(38)	#	(15)	#	(75)
Non IDU	13	(57)	29	(53)	16	(62)	#	(85)	#	(25)
Transgender Subtotal	**23**		**55**		**26**		**#**		**#**	

§ Excludes 179 males, 19 females and 2 transgenders for whom race/ethnicity information is unknown.
* See Technical Notes "Transgender Status."
Data not released due to potential small population size.

The 2006 HIV Consensus Estimates

The HIV/AIDS Statistics, Epidemiology, and Intervention Research Section periodically examines all known data and consults experts in the field in order to arrive at the best estimates of HIV prevalence and incidence for San Francisco. These estimates are called the "HIV Consensus Estimates" and were previously produced in 1992, 1997, and 2001.

From June 2005 through April 2006, we reviewed over 50 different sources of data and solicited the opinions of approximately 75 HIV/AIDS researchers, service providers, public health officials, and epidemiologists. Table 1.5 shows the resulting estimated population sizes of persons at risk for HIV and the number living with HIV/AIDS as of January 1, 2006. The table also shows the projected number acquiring HIV in 2006.

Compared to the 2001 HIV Consensus Estimates, there is a decrease in the projected number of new HIV infections among adults (975 vs. 1,082).

Table 1.5 The 2006 HIV Consensus Estimates: population size, HIV prevalence, and HIV incidence by behavioral risk population, San Francisco

Population	Population size on 1/1/2006	Number HIV+ on 1/1/2006	% HIV+	New infections during 2006	Incidence rate (% per year)
MSM	58,343	14,205	24.3%	772	1.75%
MTF (non IDU)	1,434	327	22.8%	42	3.78%
MSM IDU	5,234	2,196	42.0%	79	2.58%
FSM/F IDU	4,030	423	10.5%	18	0.51%
MSF IDU	7,076	954	13.5%	31	0.51%
MTF IDU	449	194	43.2%	16	6.08%
FSM/F (at risk population)	8,999	298	3.3%	12	0.14%
MSF (at risk population)	2,585	82	3.2%	5	0.19%
Blood	N/A	29	N/A	0	N/A
Total	**N/A**	**18,708***	**N/A**	**975***	**N/A**

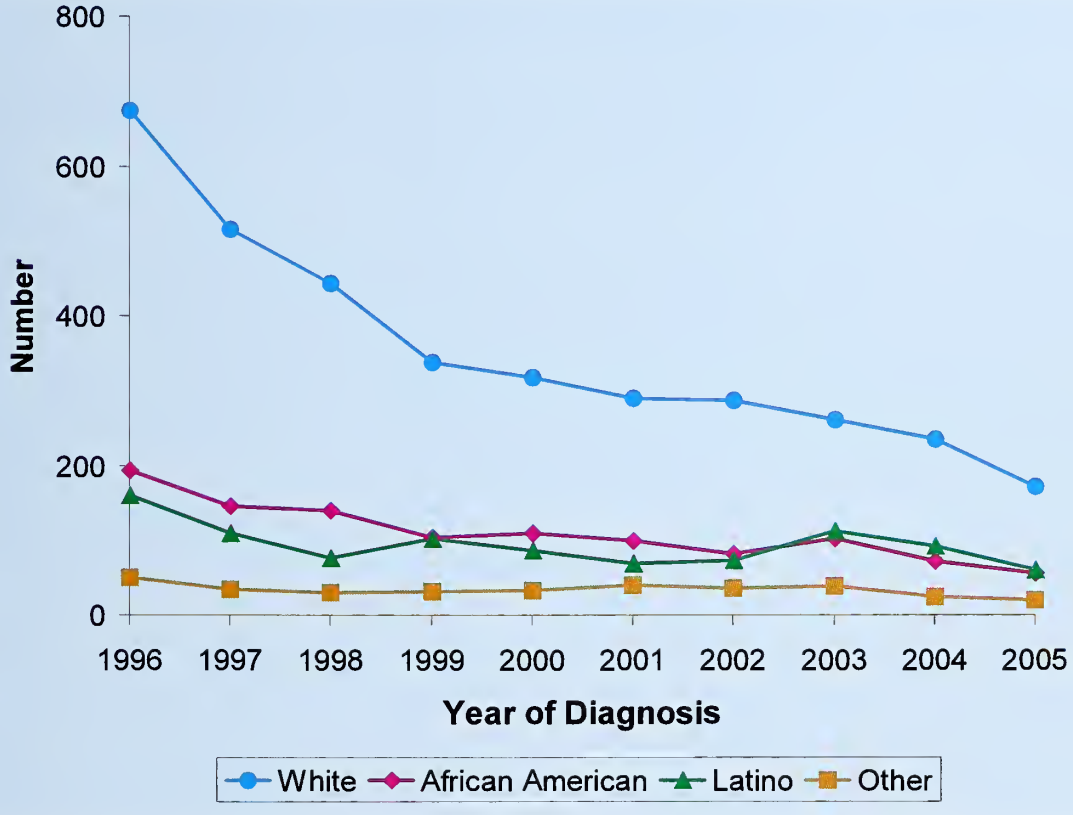
MSM: Men who have sex with men
MTF: Male to female transgender persons
MSM IDU: MSM who also inject drugs
FSM/F IDU: Female injection drug users who have sex with males/females
MSF IDU: Heterosexual male injection drug users
MTF IDU: MTF who also inject drugs
FSM/F: Adult females estimated to be at risk through heterosexual contact with HIV+ male or female partners
MSF: Adult males estimated to be at risk through heterosexual contact with HIV+ female partners
Blood: Persons exposed through transfusion of blood or blood products
* These figures do not include estimate for infants and children.

2 Trends in AIDS Incidence

Race/ethnicity

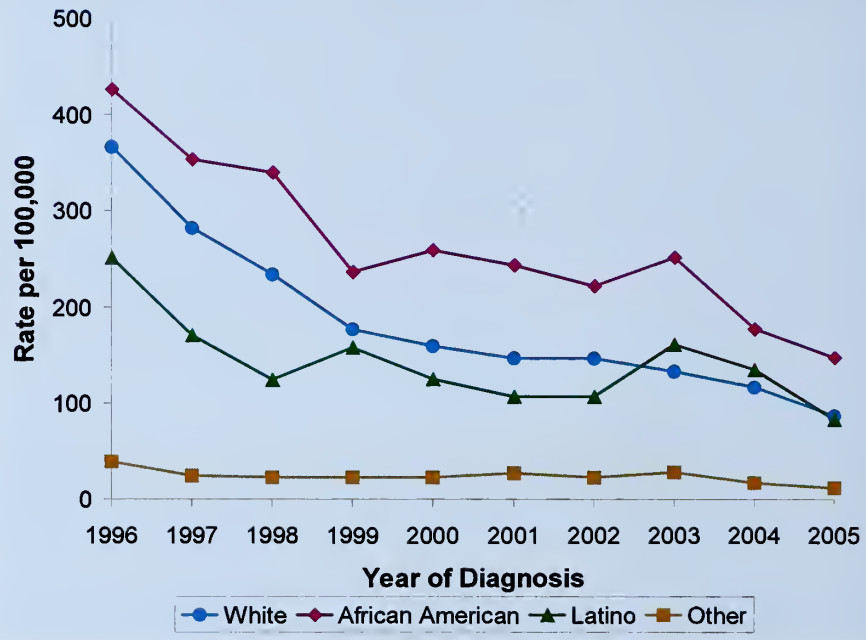
In absolute numbers, AIDS cases in San Francisco have occurred predominantly among whites (Figure 2.1). In general, the number of AIDS cases has declined over the last 10 years. There was an increase in cases among people of color between 2002 and 2003. Delays in reporting affect the numbers of cases for recent years, particularly for 2004 and 2005.

Figure 2.1 Number of AIDS cases by race/ethnicity, San Francisco, 1996-2005



Since 1996, the incidence rates of AIDS among African American men have consistently been higher than for men of all other race/ethnic groups. The incidence rate for Latino men exceeded that of white men in 2003 and 2004. In 2005, the incidence rate of AIDS per 100,000 population was 148 among African American men, 87 for white men, and 84 for Latino men (Figure 2.2). Delays in reporting affect estimates for recent years, particularly 2004 and 2005.

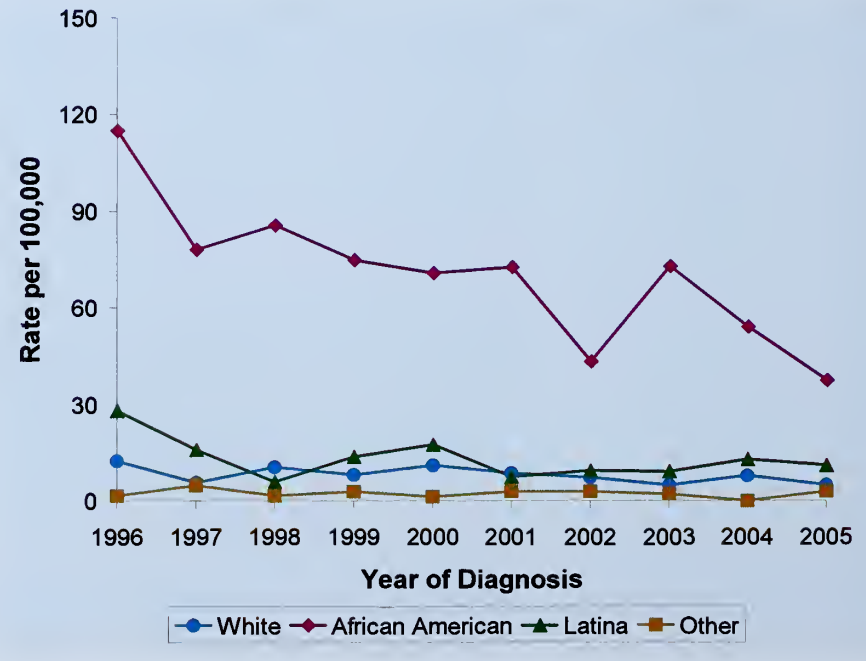
Figure 2.2 **Male annual AIDS incidence rates* per 100,000 population by race/ethnicity, San Francisco, 1996-2005**



* See Technical Notes "AIDS Incidence Rates."

The incidence rate of AIDS among women is considerably lower than that among men. African American women have been disproportionately impacted by AIDS throughout the epidemic compared to women of other race/ethnicities. The incidence rate among African American women was 37 per 100,000 in 2005 (Figure 2.3).

Figure 2.3 **Female annual AIDS incidence rates* per 100,000 population by race/ethnicity, San Francisco, 1996-2005**

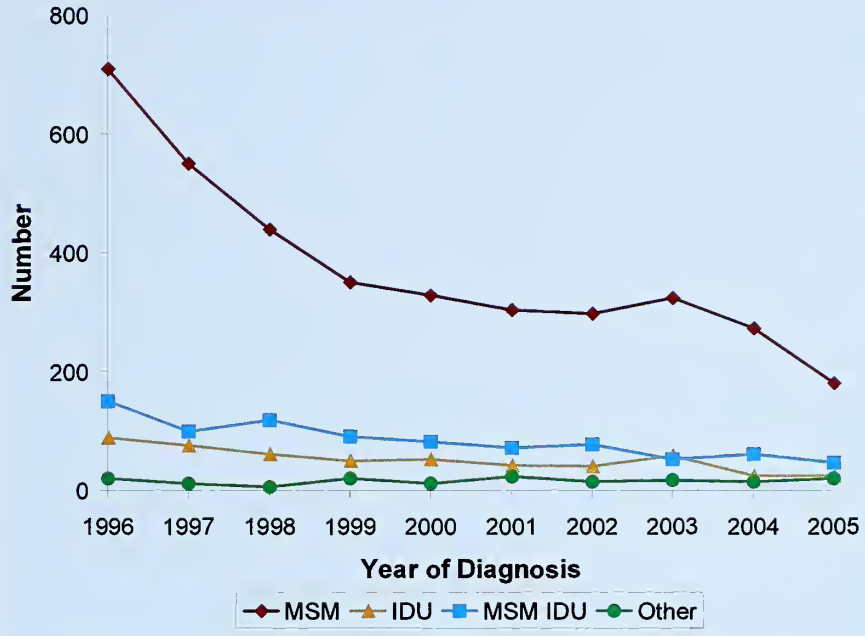


* See Technical Notes "AIDS Incidence Rates."

Exposure category

The majority of male AIDS cases have occurred among MSM (Figure 2.4). The number of male heterosexual IDU AIDS cases increased from 41 to 59 between 2002 and 2003. In 2005, 66% of male AIDS cases were MSM, 17% were MSM IDU, and 9% were heterosexual IDU.

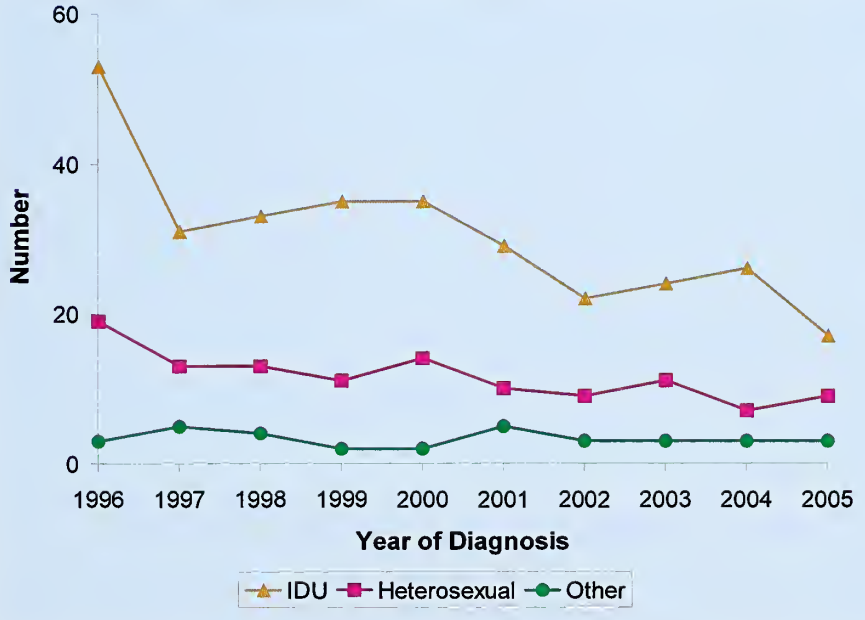
Figure 2.4 Number of male AIDS cases* by exposure category, San Francisco, 1996-2005



* Excludes male-to-female transgender AIDS cases.

The predominant exposure category of AIDS cases among women is injection drug use, followed by heterosexual transmission (Figure 2.5). Between 2003 and 2004, the percentage of female AIDS cases attributed to injection drug use increased from 63% to 72%, while the percentage of cases attributed to heterosexual contact decreased from 29% to 19%. In 2005, 59% of female AIDS cases were IDU and 31% were heterosexual. Nationwide, heterosexual contact was the predominant exposure for female AIDS cases.

Figure 2.5 Number of female AIDS cases* by exposure category, San Francisco, 1996-2005



* Excludes female-to-male transgender AIDS cases.

Age

The largest number of men, women and transgender persons with AIDS were diagnosed between ages 30 and 39 years (Table 2.1). Younger persons (under the age of 30) made up a larger proportion of female and transgender AIDS cases than male AIDS cases. In recent years, there was an increase in the percentage of women diagnosed with AIDS in the over 50 years age group, as well as the percentage of men in the over 40 years age groups. This may reflect the use of more effective drug therapies which have extended the time from acquiring HIV infection to the development of AIDS.

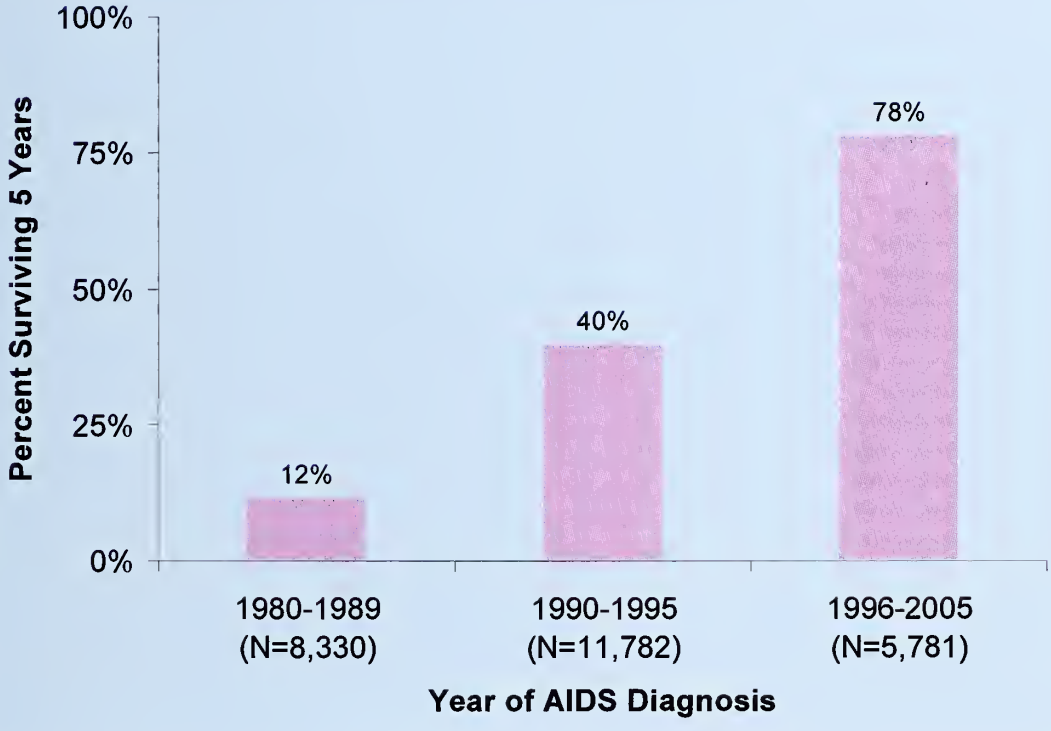
Table 2.1 AIDS cases by gender and age at diagnosis, diagnosed 1995-2005, San Francisco

	1995-1997		1998-2001		2002-2005		Cumulative Totals	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Male								
0 - 19	3	(<1)	3	(<1)	5	(<1)	45	(<1)
20 - 29	324	(10)	177	(9)	120	(8)	2,835	(11)
30 - 39	1,412	(44)	886	(43)	555	(36)	11,491	(46)
40 - 49	1,034	(33)	687	(33)	551	(36)	7,905	(31)
50+	402	(13)	300	(15)	301	(20)	2,944	(12)
Male Subtotal	**3,175**	**(100)**	**2,053**	**(100)**	**1,532**	**(100)**	**25,220**	**(100)**
Female								
0 - 19	4	(2)	3	(2)	1	(1)	23	(2)
20 - 29	27	(14)	18	(9)	22	(16)	152	(14)
30 - 39	80	(41)	75	(39)	40	(29)	415	(39)
40 - 49	66	(34)	70	(36)	45	(33)	311	(30)
50+	20	(10)	27	(14)	29	(21)	153	(15)
Female Subtotal	**197**	**(100)**	**193**	**(100)**	**137**	**(100)**	**1,054**	**(100)**
Transgender								
13 - 29	17	(23)	13	(19)	6	(10)	81	(24)
30 - 39	37	(49)	27	(40)	30	(51)	154	(46)
40+	21	(28)	28	(41)	23	(39)	100	(30)
Transgender Subtotal	**75**	**(100)**	**68**	**(100)**	**59**	**(100)**	**335**	**(100)**

3 Survival among Persons with AIDS

Survival after AIDS diagnosis has improved over time. Survival was poor for persons diagnosed between 1980-1989. During that time only 12% of persons diagnosed with AIDS survived five years or more (Figure 3.1). For persons diagnosed between 1990 and 1995, 40% survived at least five years after their AIDS diagnosis. It is estimated that 78% of persons diagnosed with AIDS between 1996 and 2005 survived at least five years. This proportion may change as more follow-up time is allowed and vital status is updated. Improvements in survival among persons diagnosed with AIDS after 1995 are attributable to more effective antiretroviral therapies.

Figure 3.1 Proportion surviving five years for persons diagnosed with AIDS in 1980-1989, 1990-1995, and 1996-2005, San Francisco



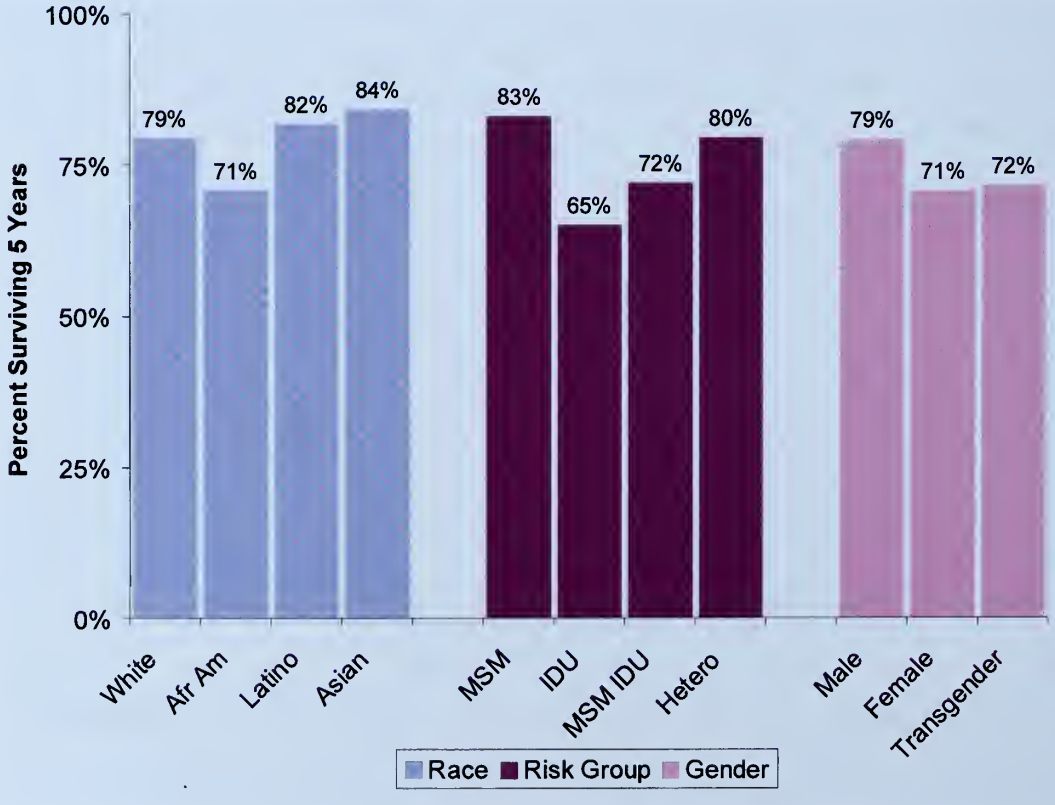
* See Technical Notes "AIDS Survival."

Disparities in survival have occurred across race/ethnicity, risk, and gender groups. For persons diagnosed with AIDS between 1996 and 2005, African Americans had lower proportion surviving five years after AIDS compared to other racial/ethnic groups. The 5-year survival rate was 79% for whites, 71% for African Americans, 82% for Latinos, and 84% for Asians (Figure 3.2).

Men who have sex with men (MSM) and heterosexuals had better survival compared to heterosexual injection drug users (IDU) and MSM IDU. Eighty-three percent of MSM and 80% of heterosexuals survived five years after AIDS diagnosis, compared to only 72% of MSM IDU and 65% of other IDU. Worse survival among IDU partly reflects higher death rates from causes associated with drug use such as overdose, liver disease, and other infections.

Seventy-nine percent of men, 71% of women, and 72% of transgenders survived five years after AIDS diagnosis. These differences are consistent with lower use of antiretroviral therapy among women and transgenders compared to men.

Figure 3.2 Proportion surviving five years for persons diagnosed with AIDS between 1996 and 2005 by race/ethnicity, exposure category, and gender, San Francisco



* See Technical Notes "AIDS Survival."

4 Trends in AIDS Mortality

A total of 17,943 deaths have occurred among San Francisco AIDS cases as of December 31, 2005 (Table 4.1). The number of AIDS deaths declined between 2002 and 2004; however, reporting of deaths in recent years is not yet complete. Cumulatively, the most deaths occurred in the 30-39 year old age group; but in recent years, the largest number of deaths occurred in the 40-49 year old age group.

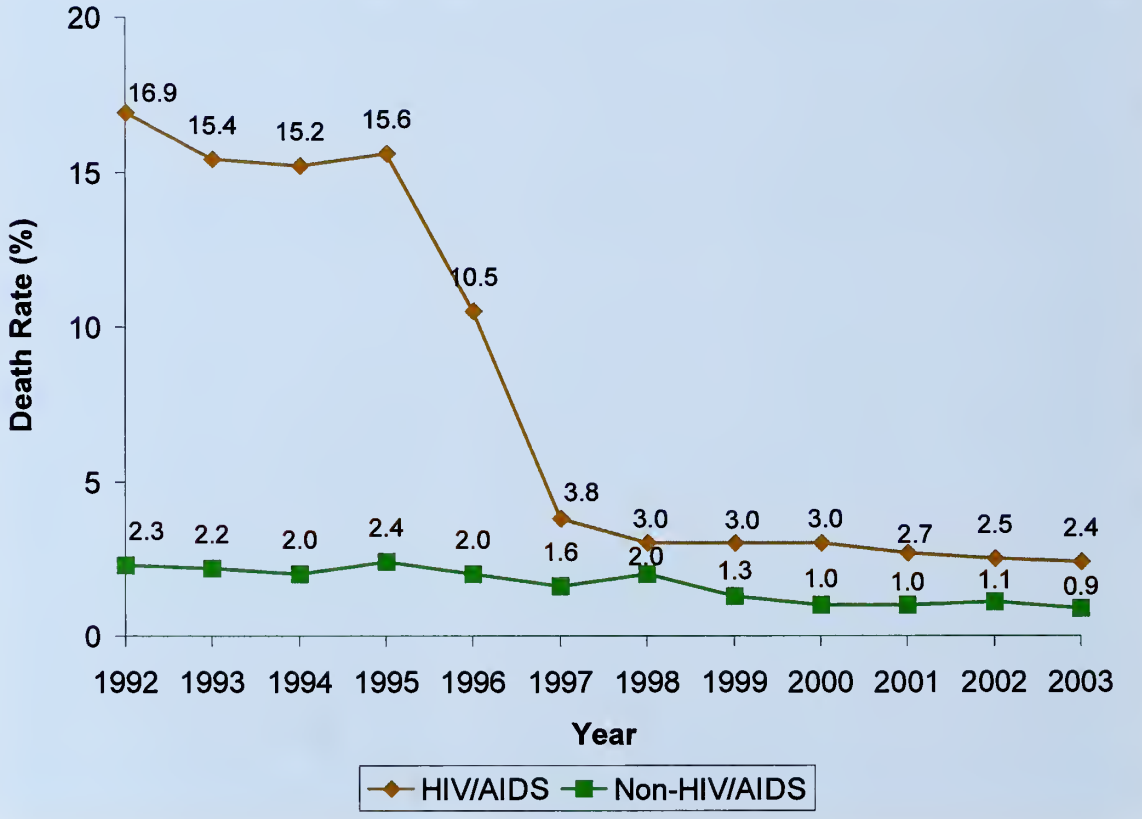
Table 4.1 Deaths in persons with AIDS, by gender, race/ethnicity, and exposure category, San Francisco, 2002-2005

	Year of Death								Cumulative Totals as of 12/31/2005
	2002		2003		2004*		2005*		
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	
Gender									
Male	278	(88)	261	(88)	200	(89)	198	(87)	17,227
Female	29	(9)	28	(9)	15	(7)	23	(10)	559
Transgender	9	(3)	8	(3)	9	(4)	7	(3)	157
Race/Ethnicity									
White	192	(61)	191	(64)	128	(57)	132	(58)	13,534
African American	74	(23)	65	(22)	49	(22)	64	(28)	2,137
Latino	42	(13)	31	(10)	31	(14)	22	(10)	1,747
Other	8	(3)	10	(3)	16	(7)	10	(4)	525
Exposure Category									
MSM	177	(56)	154	(52)	114	(51)	112	(49)	13,652
IDU	58	(18)	60	(20)	45	(20)	52	(23)	1,219
MSM IDU	67	(21)	73	(25)	53	(24)	51	(22)	2,657
Heterosexual	9	(3)	6	(2)	5	(2)	4	(2)	159
Other/Unknown	5	(2)	4	(1)	7	(3)	9	(4)	256
Age at death									
0-29	4	(1)	5	(2)	3	(1)	2	(1)	1,061
30-39	64	(20)	51	(17)	34	(15)	28	(12)	7,033
40-49	152	(48)	129	(43)	90	(40)	100	(44)	6,738
50-59	79	(25)	78	(26)	57	(25)	66	(29)	2,329
60+	17	(5)	34	(11)	41	(18)	32	(14)	782
Total	**316**	**(100)**	**297**	**(100)**	**224**	**(100)**	**228**	**(100)**	**17,943**

* Data is incomplete due to reporting delay. In addition, deaths that occurred outside of San Francisco are primarily identified through matches with the National Death Index (NDI) which are complete only through 2003.

The trend in death rates in persons with AIDS was examined by their single, underlying cause of death. The death rate due to HIV/AIDS-related causes plateaued between 1992 and 1995, and then decreased from 15.6 per 100 persons with AIDS in 1995 to 2.4 per 100 persons with AIDS in 2003 (Figure 4.1). The drop in death rates beginning in 1996 reflects the impact of highly active antiretroviral therapies. For non-HIV/AIDS-related causes, the death rate in 1992 was 2.3 per 100 persons with AIDS, declining to 0.9 per 100 persons with AIDS in 2003.

Figure 4.1 Death rates* due to HIV/AIDS-related and non-HIV/AIDS-related causes among persons with AIDS, San Francisco, 1992-2003



* Death rates are calculated as the number of persons with AIDS who died each year divided by the number of total AIDS cases for that year. See Technical Notes for "Causes of Death."

The proportion of deaths in which HIV/AIDS was listed as the underlying cause of death decreased from 88% of AIDS deaths occurring between 1992-1995 to 72% in 2000-2003 (Table 4.2). Other frequently occurring underlying causes of death in 2000-2003 include non-AIDS cancer (6.7%), heart disease (5.2%), and liver disease (2.3%), diseases that may be due to HIV-related risk behaviors or tobacco use. The proportion of persons with AIDS who died of these non-HIV/AIDS-related conditions increased over time.

Table 4.2 Underlying causes of death among persons with AIDS, San Francisco, 1992-2003

	Year of Death					
	1992-1995 N= 5,673		1996-1999 N= 2,102		2000-2003 N=1,235	
Underlying Cause of Death*	**No.**	**(%)**	**No.**	**(%)**	**No.**	**(%)**
HIV/AIDS	4,964	(87.5)	1,563	(74.4)	892	(72.2)
Non-AIDS cancer	72	(1.3)	87	(4.1)	83	(6.7)
Lung cancer	26	(0.5)	21	(1.0)	27	(2.2)
Liver cancer	3	(0.1)	16	(0.8)	13	(1.1)
Anal cancer	0	(0.0)	6	(0.3)	5	(0.4)
Heart disease	54	(1.0)	53	(2.5)	64	(5.2)
Coronary heart disease	18	(0.3)	21	(1.0)	44	(3.6)
Cardiomyopathy	3	(0.1)	11	(0.5)	5	(0.4)
Liver disease	63	(1.1)	27	(1.3)	28	(2.3)
Liver cirrhosis	15	(0.3)	10	(0.5)	13	(1.1)
Alcoholic liver disease	18	(0.3)	14	(0.7)	12	(1.0)
Drug overdose	42	(0.7)	53	(2.5)	25	(2.0)
Suicide	58	(1.0)	29	(1.4)	19	(1.5)
Mental disorders due to substance use	16	(0.3)	16	(0.8)	17	(1.4)
Chronic obstructive lung disease	20	(0.4)	12	(0.6)	16	(1.3)
Viral hepatitis	60	(1.1)	57	(2.7)	7	(0.6)
Pneumonia	49	(0.9)	24	(1.1)	0	(0.0)
Aspergillosis	52	(0.9)	34	(1.6)	0	(0.0)

* See Technical Notes "Causes of Death."

Table 4.3 summarizes both underlying and contributory causes of death among persons with AIDS. Although persons with AIDS predominantly died of HIV/AIDS-related causes, the increasing proportion of deaths due to non-HIV/AIDS-related causes suggests that certain highly prevalent risk behaviors in this population are playing an important role in mortality trends. Co-infection with HIV and hepatitis viruses may be related to deaths associated with liver disease, viral hepatitis, and liver cancer. Smoking may be related to deaths associated with lung cancer, obstructive lung disease, and coronary heart disease. Use of illicit drugs contributes to deaths due to drug overdoses and mental disorders.

Table 4.3 Multiple causes of death among persons with AIDS, San Francisco, 1992-2003

	Year of Death					
	1992-1995 N = 5,673		1996-1999 N = 2,102		2000-2003 N = 1,235	
Multiple Causes of Death*	**No.**	**(%)**	**No.**	**(%)**	**No.**	**(%)**
HIV/AIDS	5,409	(95.3)	1,877	(89.3)	1,064	(86.2)
Heart disease	956	(16.9)	334	(15.9)	253	(20.5)
Coronary heart disease	39	(0.7)	39	(1.9)	70	(5.7)
Cardiomyopathy	56	(1.0)	39	(1.9)	23	(1.9)
Liver disease	306	(5.4)	189	(9.0)	193	(15.6)
Liver cirrhosis	74	(1.3)	67	(3.2)	79	(6.4)
Alcoholic liver disease	30	(0.5)	20	(1.0)	16	(1.3)
Pneumonia	880	(15.5)	300	(14.3)	187	(15.1)
Viral hepatitis	107	(1.9)	124	(5.9)	164	(13.3)
Septicemia	352	(6.2)	149	(7.1)	134	(10.9)
Non-AIDS cancer	326	(5.7)	167	(7.9)	117	(9.5)
Lung cancer	27	(0.5)	25	(1.2)	31	(2.5)
Liver cancer	4	(0.1)	20	(1.0)	16	(1.3)
Anal cancer	1	(<1)	8	(0.4)	8	(0.6)
Renal disease	189	(3.3)	112	(5.3)	106	(8.6)
Mental disorders due to substance use	66	(1.2)	63	(3.0)	70	(5.7)
Chronic obstructive lung disease	60	(1.1)	44	(2.1)	49	(4.0)
Drug overdose	47	(0.8)	65	(3.1)	35	(2.8)
Cerebrovascular disease	72	(1.3)	43	(2.0)	35	(2.8)
Suicide	58	(1.0)	29	(1.4)	19	(1.5)
Aspergillosis	80	(1.4)	52	(2.5)	14	(1.1)

* Includes underlying and contributory causes of death. Individuals may have more than one cause of death. See Technical Notes "Causes of Death."

5 Persons Living with HIV/AIDS

HIV/AIDS surveillance data

Ongoing incidence of HIV, coupled with the increase in survival after AIDS, has resulted in an increasing number of persons living with HIV/AIDS. As of December 31, 2005, there were 14,748 San Francisco residents recorded as living with HIV/AIDS (Table 5.1). The estimated total number of persons living with HIV, over 18,708 (Table 1.5), suggests that almost 4,000 or 21% of infected persons are unaware of their status or not in care. The demographic and risk characteristics of persons living with HIV/AIDS have remained relatively stable between 2002 and 2005; most are white, aged 40-49 years, and MSM (including MSM IDU).

Table 5.1 Persons living with HIV/AIDS by demographic and risk characteristics, San Francisco, 2002-2005*

	2002		2003		2004		2005	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Gender								
Male	11,690	(92)	12,402	(92)	13,096	(92)	13,567	(92)
Female	726	(6)	780	(6)	837	(6)	884	(6)
Transgender	242	(2)	273	(2)	288	(2)	297	(2)
Race/Ethnicity								
White	8,484	(67)	8,870	(66)	9,296	(65)	9,557	(65)
African American	1,822	(14)	1,961	(15)	2,048	(14)	2,116	(14)
Latino	1,643	(13)	1,813	(13)	1,977	(14)	2,103	(14)
Asian/Pacific Islander	506	(4)	566	(4)	625	(5)	657	(4)
Native American	79	(1)	87	(1)	95	(1)	101	(<1)
Other/Unknown	124	(1)	158	(1)	180	(1)	214	(2)
Age (at end of each year)								
0 - 19	38	(<1)	42	(<1)	41	(<1)	34	(<1)
20 - 29	482	(4)	517	(4)	579	(4)	588	(4)
30 - 39	3,578	(28)	3,511	(26)	3,344	(24)	3,112	(21)
40 - 49	5,290	(42)	5,618	(42)	5,933	(42)	6,190	(42)
50+	3,270	(26)	3,767	(28)	4,324	(30)	4,824	(33)
Risk								
MSM	9,210	(73)	9,746	(72)	10,335	(73)	10,697	(73)
IDU	1,138	(9)	1,219	(9)	1,263	(9)	1,278	(9)
MSM IDU	1,648	(13)	1,704	(13)	1,756	(12)	1,791	(12)
Heterosexual	253	(2)	279	(2)	303	(2)	337	(2)
Transfusion/Hemophilia	36	(<1)	38	(<1)	37	(<1)	37	(<1)
Other/Unknown	373	(3)	469	(3)	527	(4)	608	(4)
Total	**12,658**		**13,455**		**14,221**		**14,748**	

* Persons living with HIV/AIDS at the end of each year.

Unmet need estimate

An analysis was conducted to estimate unmet need for primary medical care for persons living with HIV/AIDS in San Francisco. Persons with HIV/AIDS were considered to have a met need for care if they had received antiretroviral therapy or had at least one CD4 or viral load test during the 12-month period from July 1, 2003 through June 30, 2004. Care information was obtained from laboratory reporting of viral load and CD4 test results, medical record reviews, and data from Medi-Cal, AIDS Drug Assistance Program (ADAP) and Kaiser Permanente Northern California. Using all available data sources, the total number of persons living with AIDS (PLWA), the total number of persons living with HIV/non-AIDS (PLWH), the proportion of PLWA who did not receive care based on chart reviews, and the number of PLWH who did not receive care were determined.

It was estimated that a total of 909 PLWA (10%) and 1,675 PLWH (22%) did not receive primary medical care during July 2003 and June 2004 (Table 5.2). Among PLWA, unmet need was similar across all categories examined. Persons aged 20 to 29 years were found to have the greatest proportion of unmet need for medical care (39%) among those living with HIV/non-AIDS.

Table 5.2 Unmet need by demographic characteristics among persons living with HIV/AIDS, San Francisco, July 2003-June 2004

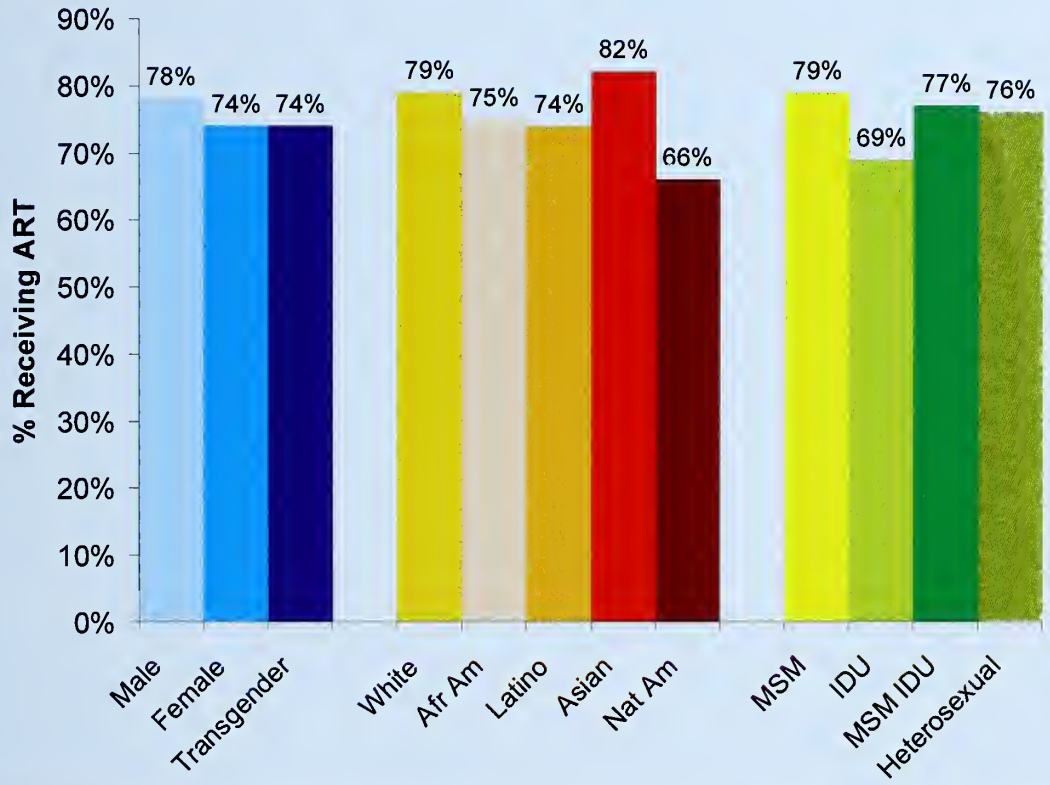
	Persons with AIDS N=8,878		Persons with HIV/non-AIDS N=7,568		ALL N=16,446	
	with unmet need		with unmet need		with unmet need	
	Number	%	Number	%	Number	%
Total	909	10%	1,675	22%	2,584	16%
Gender						
Male	863	10%	1,545	22%	2,408	16%
Female	46	9%	130	19%	176	15%
Race/Ethnicity*						
White	627	11%	999	21%	1,626	16%
African American	129	10%	291	24%	420	17%
Latino	116	9%	226	23%	342	15%
Asian/Pacific Islander	30	8%	78	20%	108	14%
Other	7	8%	33	14%	40	12%
Age (as of 6/30/04)						
0-19	1	8%	12	21%	13	17%
20-29	13	8%	221	39%	234	32%
30-39	209	12%	613	26%	822	20%
40-49	413	10%	563	19%	976	14%
50+	273	9%	266	16%	539	11%

* Persons with unknown race/ethnicity were included in the total count but not listed in this category.

6 Use of Antiretroviral Therapy among Persons with AIDS

Use of antiretroviral therapy (ART) was assessed among persons living with AIDS as of December 31, 2005, including those who moved outside of San Francisco or were lost to follow-up. Overall, 77% of persons living with AIDS received ART. A greater percent of men have used ART compared to women or transgender persons (Figure 6.1). Use of ART was higher among Asians/Pacific Islanders and whites compared to African Americans, Latinos, and Native Americans. ART use was more common among MSM than among heterosexual injection drug users.

Figure 6.1 Use of antiretroviral therapy among persons living with AIDS by gender, race/ethnicity, and exposure category, San Francisco, December 2005



7 Insurance Status at Time of AIDS Diagnosis

Insurance status at the time of AIDS diagnosis differs by gender. Between 2000 and 2005, the proportion of men who were insured at the time of AIDS diagnosis increased, with the proportion using public insurance increasing from 16% in 2000 to 29% in 2005 (Figure 7.1). In women, the proportion of uninsured has been declining since 2002. Among transgender AIDS cases diagnosed in 2005, 50% had public insurance and 50% had no insurance. For AIDS cases diagnosed between 2000 and 2005, 92% of transgenders and 84% of women were under-insured (i.e. no insurance or with public insurance), compared to 54% of men (Figure 7.2).

Figure 7.1 Trends in insurance status among persons with AIDS by gender, San Francisco, 2000-2005

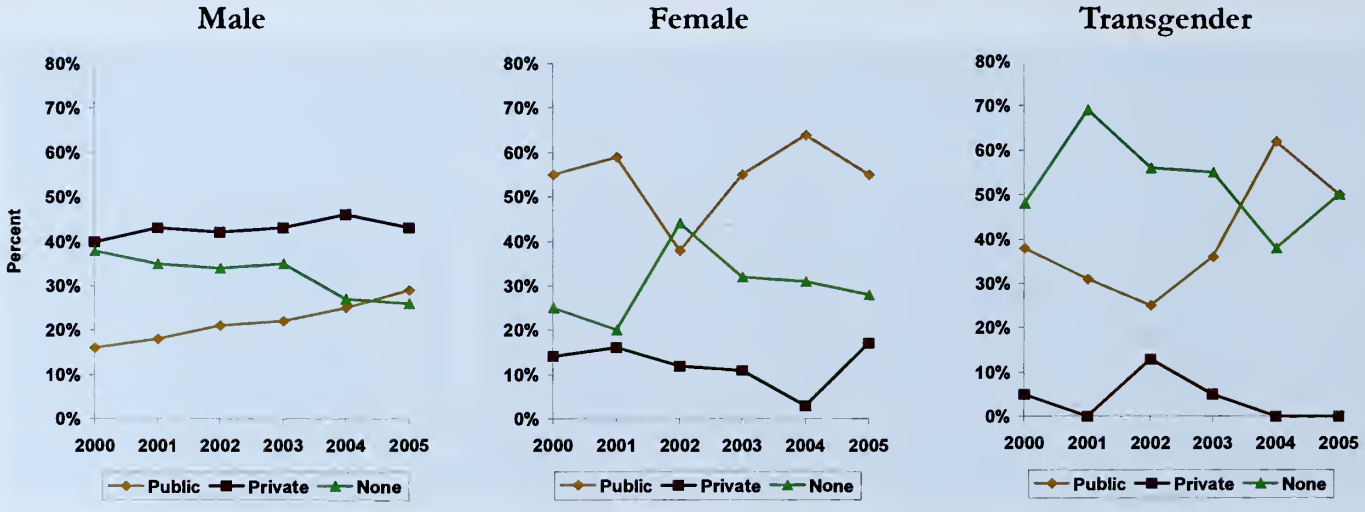
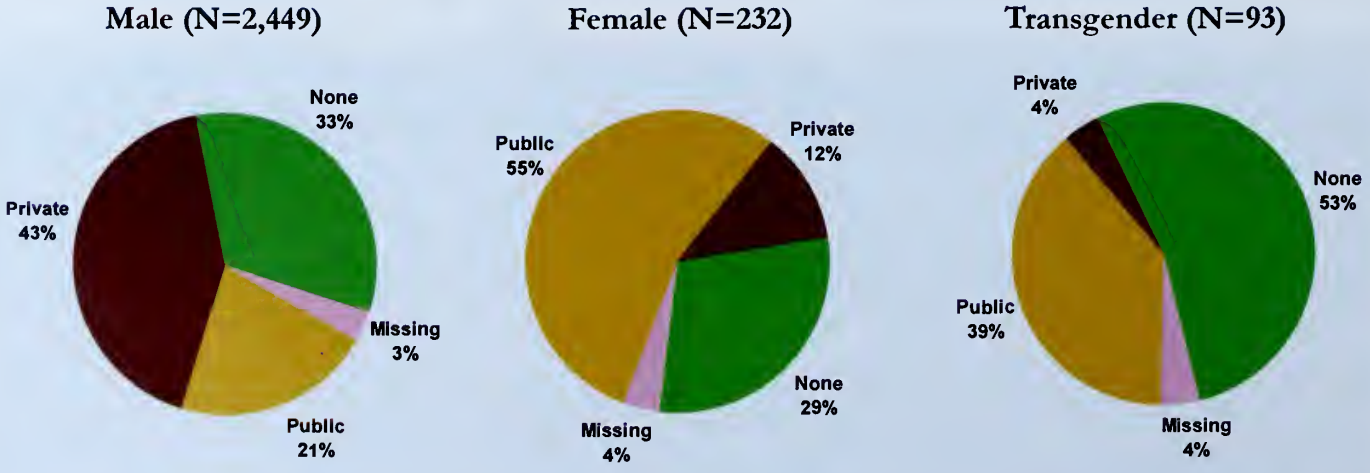


Figure 7.2 AIDS cases by gender and insurance status at diagnosis, San Francisco, 2000-2005

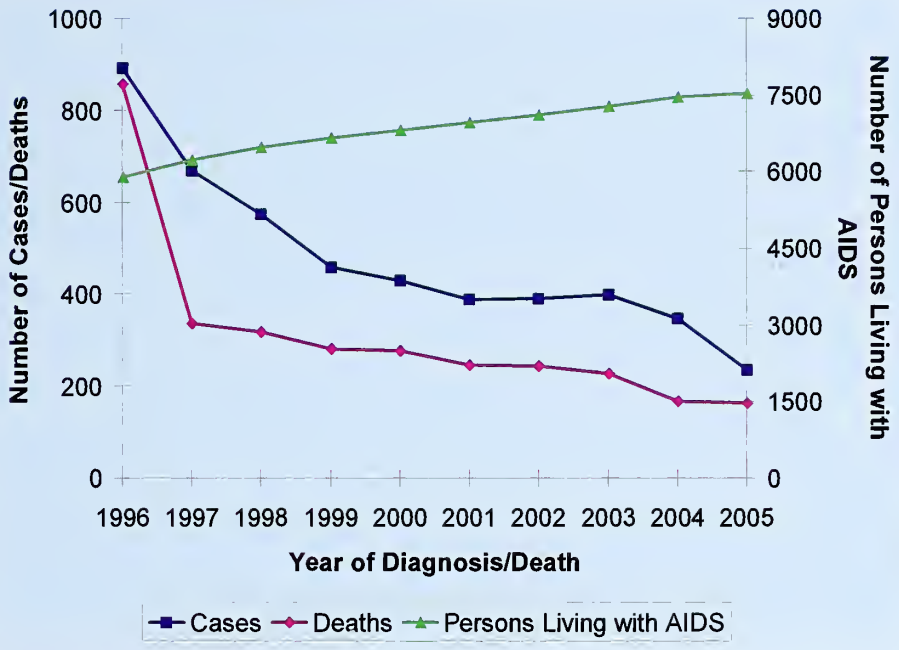


8 HIV/AIDS among Men Who Have Sex with Men

AIDS surveillance data

While the number of new AIDS cases and AIDS deaths among MSM has continued to decline, the number of MSM living with AIDS continues to increase (Figure 8.1). This is due in part to improved treatment for persons with AIDS. In 2005, there were 7,524 MSM living with AIDS in San Francisco.

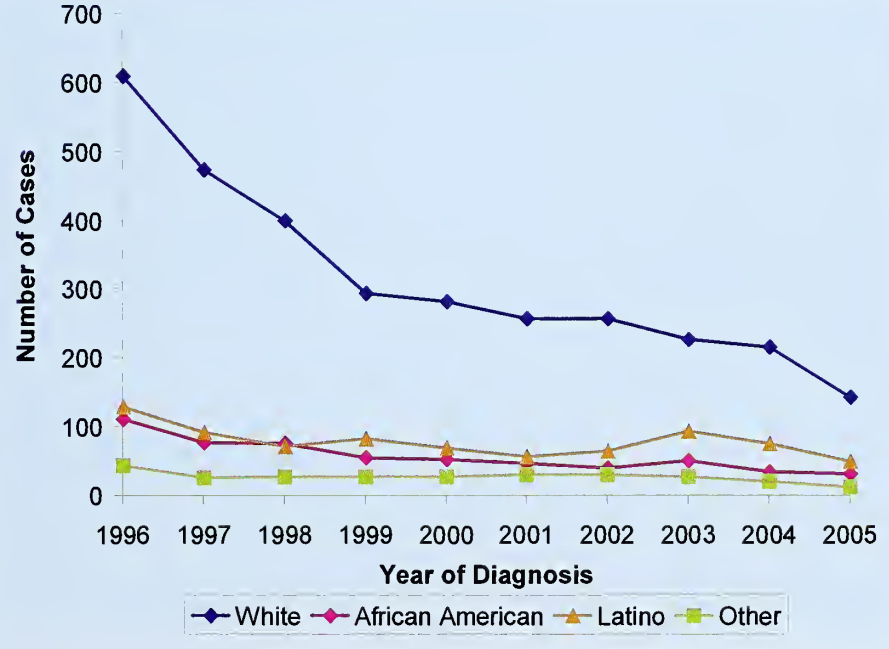
Figure 8.1 AIDS cases, deaths, and prevalence among MSM*, San Francisco, 1996-2005



* Includes MSM and MSM IDU.

The majority of San Francisco AIDS cases have occurred among white MSM (Figure 8.2). Although the number of AIDS cases has declined among all MSM, whites still account for the greatest number of MSM cases followed by Latino MSM.

Figure 8.2 AIDS cases among MSM* by race/ethnicity, San Francisco, 1996-2005



* Includes MSM and MSM IDU.

HIV behavioral and prevalence data

The Stop AIDS Project

The Stop AIDS Project collects information on sexual behavior and self-reported HIV status through the course of outreach HIV prevention activities for MSM in San Francisco. Their data provide an opportunity to track annual trends in HIV-related risk behavior in a large, community-recruited sample of MSM.

Figure 8.3 illustrates trends in unprotected anal intercourse (UAI) from 1998 through 2005 by self-reported HIV serostatus. An overall trend of increasing UAI is apparent among HIV-positive MSM for the whole time period. Figure 8.3 also illustrates that UAI is most commonly reported by HIV-positive MSM.

Figure 8.4 shows the proportion of MSM who report having UAI with one or more sex partners whose HIV status was not known to them. This measure most closely gauges the potential for HIV transmission to occur by excluding sex between individuals known to be of the same HIV status. Overall UAI with potentially HIV-serodiscordant men peaked in 2001. The downward trend continues among HIV-positive men.

Figure 8.3 Percent of MSM reporting unprotected anal intercourse by self-reported HIV status in the last six months, the Stop AIDS Project, San Francisco, 1998-2005

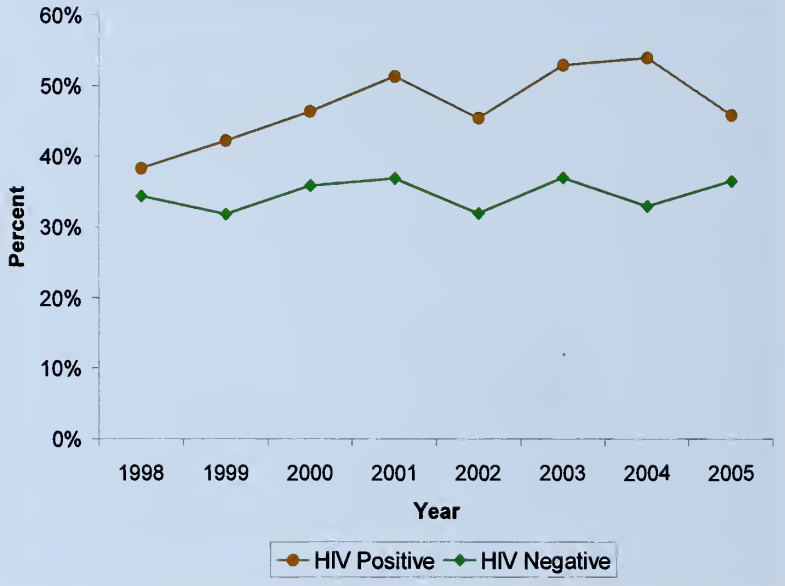
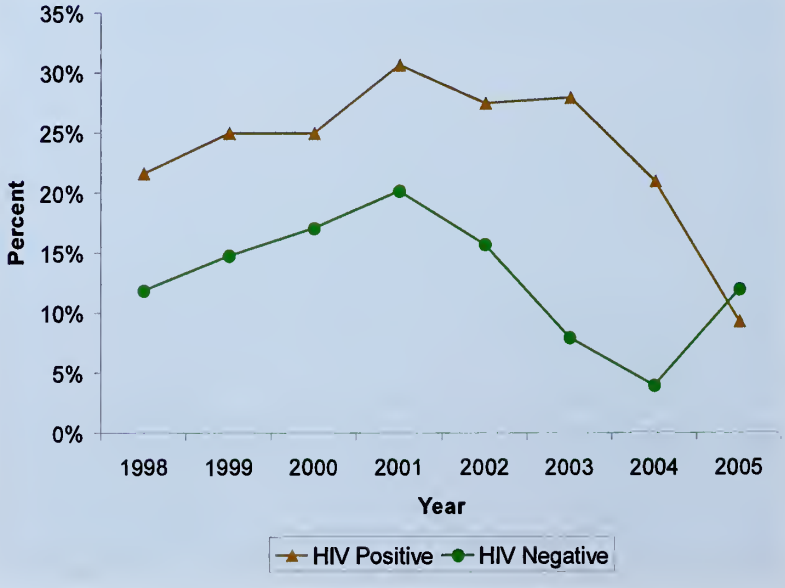


Figure 8.4 Percent of MSM reporting unprotected anal intercourse with at least one partner of unknown HIV status* in the last six months, the Stop AIDS Project, San Francisco, 1998-2005



* For MSM who did not know or report their HIV status, any UAI was considered potentially serodiscordant.

Telephone Survey of MSM

Among the 492 MSM who were included in a telephone survey in 2002, 92% reported having received HIV-specific medical care (Table 8.1). This proportion was somewhat lower among African American and younger men. Receipt of antiretroviral therapy was highest among Asians/Pacific Islanders and lowest among African Americans. Use of antiretroviral therapy was lowest among men without health insurance and younger men. However, many men may not have been clinically eligible for antiretroviral therapy. Pneumococcal vaccine is recommended for HIV-infected persons yet only a relatively small proportion (26.7%) of men in the survey reported receiving this vaccine. A greater proportion of Asians/Pacific Islanders received the vaccine while a lower proportion of Latinos or men of mixed race had been vaccinated. Receipt of vaccine was reported less frequently among men with private insurance or without health insurance and younger men. Screening for tuberculosis (TB) is also recommended for HIV-infected persons yet, with the exception of African American men, the proportion of men who had been screened for TB was relatively low. Men with private health insurance and younger men reported TB screening less frequently.

Table 8.1 Receipt of HIV-related medical care among HIV-infected MSM, Telephone Survey of MSM, 2002

	Services received in the past 12 months*			
	Ever Received HIV-specific Care	Antiretroviral Therapy	Pneumonia Vaccine	Tuberculosis Screening
Total	**92.1%**	**76.9%**	**26.7%**	**56.6%**
Race				
Asian/Pacific Islander	91.1%	91.1%	51.2%	52.6%
African American	86.7%	57.9%	36.9%	74.0%
Latino	89.9%	69.9%	22.2%	58.7%
Mixed	97.8%	82.0%	16.2%	59.9%
White	92.9%	79.6%	26.9%	55.6%
Insurance				
Public	95.3%	79.4%	32.1%	77.4%
Private	90.8%	75.7%	22.2%	41.6%
None	93.2%	28.1%	27.9%	78.4%
Age (years)				
25-39	88.5%	65.6%	25.0%	55.7%
40-54	93.7%	80.8%	26.8%	56.1%
55-70	92.5%	83.4%	29.3%	60.3%

* Results are weighted for survey design.

National Behavioral Surveillance Survey

In 2003, the CDC initiated a national behavioral surveillance system in the largest US metropolitan areas (see Technical Notes, National Behavioral Surveillance). A total of 1,574 MSM in San Francisco were surveyed in 2003 through 2004, and those men described 3,789 sexual partnerships that they had had in the previous six months, including the place where they met their partners and the HIV status of their partners. Table 8.2 shows the places where people met their sexual partners. The largest number of MSM met their partners at bars, cafes, nightclubs or restaurants followed by the Internet. The highest risk of having unprotected anal sex with a partner of potentially HIV-serodiscordant status were those met at sex clubs or bathhouses (7.5%). Of note, unprotected potentially serodiscordant sex was significantly more likely to occur with partners met on the Internet compared to those met at bars (6.7% vs. 4.7%, respectively).

Table 8.2 Partnerships among MSM by venue where partnerships were initiated, the National Behavioral Surveillance Survey, San Francisco, 2003-2004

	No. of partnerships initiated at venue	No. and percent of potentially discordant, unprotected anal sex partnerships
Total	**3,408**	**171 (5.0%)**
Venue where partnerships were initiated		
Dating services, newspaper ads	18	0 (0.0%)
Church,political function or club	32	2 (6.3%)
Gym, athletic activity	108	3 (2.8%)
Private party, social club	123	3 (2.4%)
Work or school	146	3 (2.1%)
Some other way	162	12 (7.4%)
Sex club, bathhouse	293	22 (7.5%)
Street, park, library, public transport	294	21 (7.1%)
Introduced by friends	403	10 (2.5%)
Internet	611	41 (6.7%)
Bar, café, nightclub, restaurant	1,121	53 (4.7%)

Racial disparities in HIV prevalence are present throughout the United States and in San Francisco. In the National Behavioral Surveillance Survey, African-American MSM had the highest HIV prevalence (31.8%), followed by whites (26.3%), Latinos (23.1%) and Asians (10.0%). Paradoxically, the prevalence of many risk behaviors of African-American MSM in the survey tends to be the lowest of all racial groups (Table 8.3). African American MSM were less likely to have UAI with a partner of an unknown or different HIV status. HIV-negative African-American MSM were also significantly less likely to have unprotected receptive anal intercourse with an HIV-positive or unknown partner. The reasons behind the racial disparities in HIV prevalence need to be studied further.

Table 8.3 HIV prevalence among MSM by race/ethnicity, the National Behavioral Surveillance Survey, San Francisco, 2003-2004

		Risk Behavior		
	HIV prevalence	Serodiscordant/ potentially discordant unprotected anal sex	Unprotected receptive anal sex with potential HIV-positives among HIV-negative respondents	Unprotected insertive anal sex with potential HIV-negatives among HIV-positive respondents
Race				
African American	31.8%	7.2%	0.5%	6.1%
White	26.3%	12.2%	3.3%	8.8%
Latino	23.1%	10.0%	2.4%	9.4%
Asian	10.0%	11.0%	2.3%	10.0%

Sexually transmitted diseases among MSM

Figure 8.5 shows trends in male rectal gonorrhea and male gonococcal proctitis in San Francisco from 1997 through 2005. Data on male rectal gonorrhea originate from case reporting from laboratories and health providers throughout the city. Data on male gonococcal proctitis originate from the municipal STD clinic only. Infection with gonorrhea is a biological marker for high risk sexual behavior as well as a factor that enhances the acquisition and spread of HIV. Among men, rectal gonorrhea is a marker for unprotected receptive anal sex.

The last several years have seen a steady increase in reported cases of male rectal gonorrhea. Male gonococcal proctitis are cases with symptomatic infection. Data on male gonococcal proctitis suggest that some of the increase in reported male rectal gonorrhea may be due to increased screening.

Data may underestimate true levels of infections due to several factors, including lack of rectal screening by many health providers, under reporting, delayed reporting, and a large proportion of cases that do not manifest symptoms.

Figure 8.5 Male rectal gonorrhea and male gonococcal proctitis among MSM, San Francisco, 1997-2005

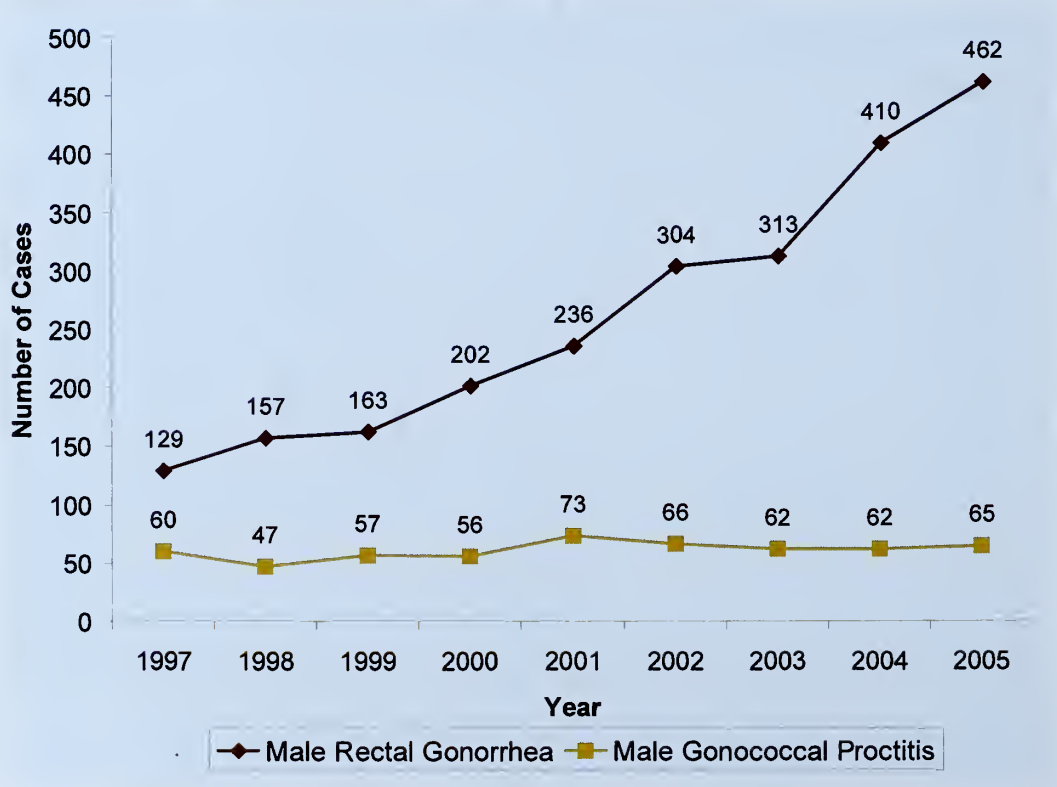
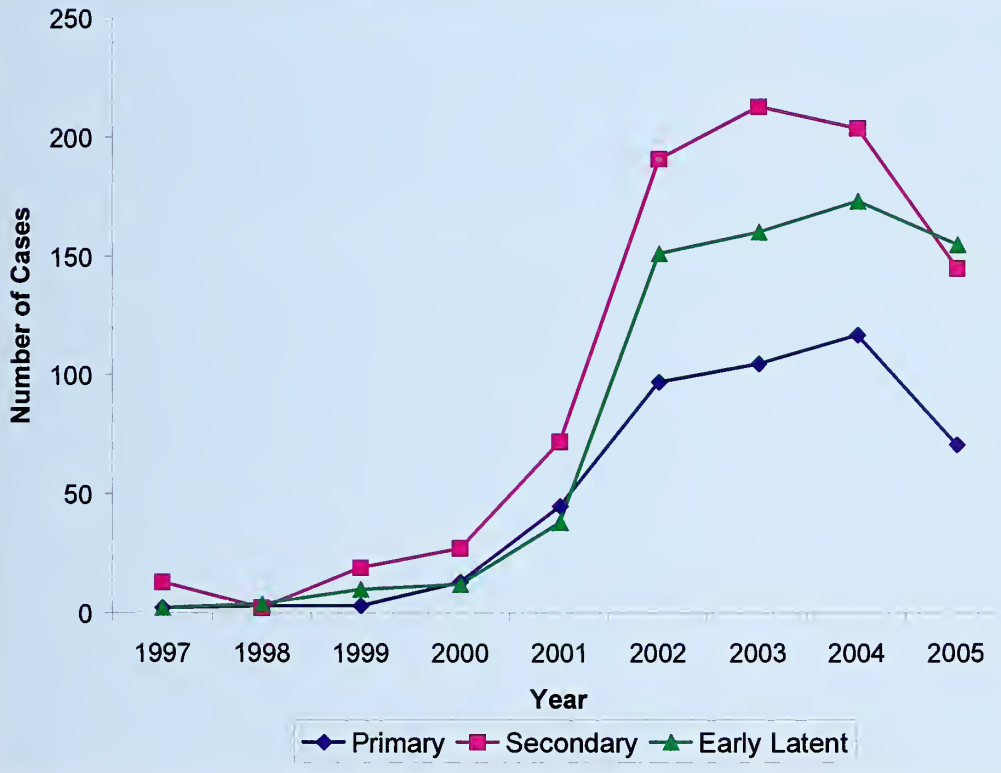


Figure 8.6 shows trends in primary, secondary, and early latent cases of syphilis among MSM in San Francisco from 1997 through 2005. Data originate from case reporting from laboratories and health providers throughout the city, although the majority are patients seen at the municipal STD clinic. Like gonorrhea, syphilis is a biological marker for high-risk sexual behavior as well as a factor that enhances the acquisition and spread of HIV. The increase in early syphilis among MSM in San Francisco since 1998 is dramatic. However, in 2005, for the first time since this rapid rise, early syphilis among MSM has declined.

Figure 8.6 Syphilis among MSM, San Francisco, 1997-2005



9 HIV/AIDS among Injection Drug Users

AIDS surveillance data

Injection drug use by non-MSM is the third most frequent exposure group among cumulative AIDS cases in San Francisco, after MSM and MSM IDU. This is in contrast to the national data on male AIDS cases in which non-MSM IDU comprise the second most frequent exposure group. The number of new AIDS cases among non-MSM IDU has declined (Figure 9.1). The number of deaths in this group declined substantially in 1997 and more modestly thereafter. The number of non-MSM IDU living with AIDS has decreased slightly in 2005. As of December 31, 2005 there were 797 non-MSM IDU living with AIDS in San Francisco.

From 1996 to 2004, the greatest number of AIDS cases among non-MSM IDU occurred among African Americans (Figure 9.2). Whites accounted for the second greatest number of cases in this risk group during this time period.

Figure 9.1 AIDS cases, deaths, and prevalence among non-MSM IDU, San Francisco, 1996-2005

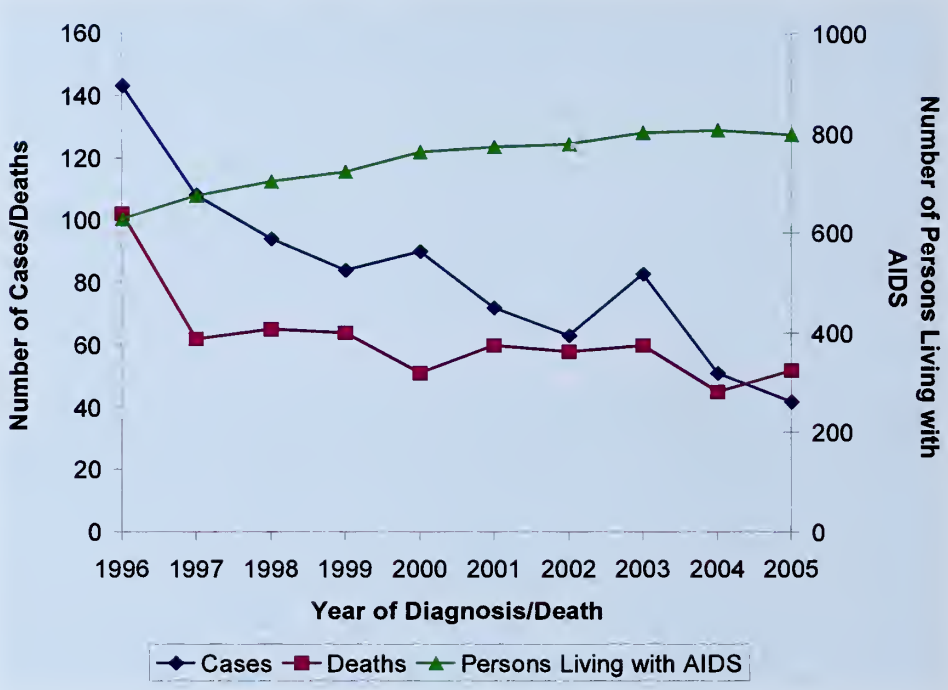


Figure 9.2 AIDS cases among non-MSM IDU by race/ethnicity, San Francisco, 1996-2005

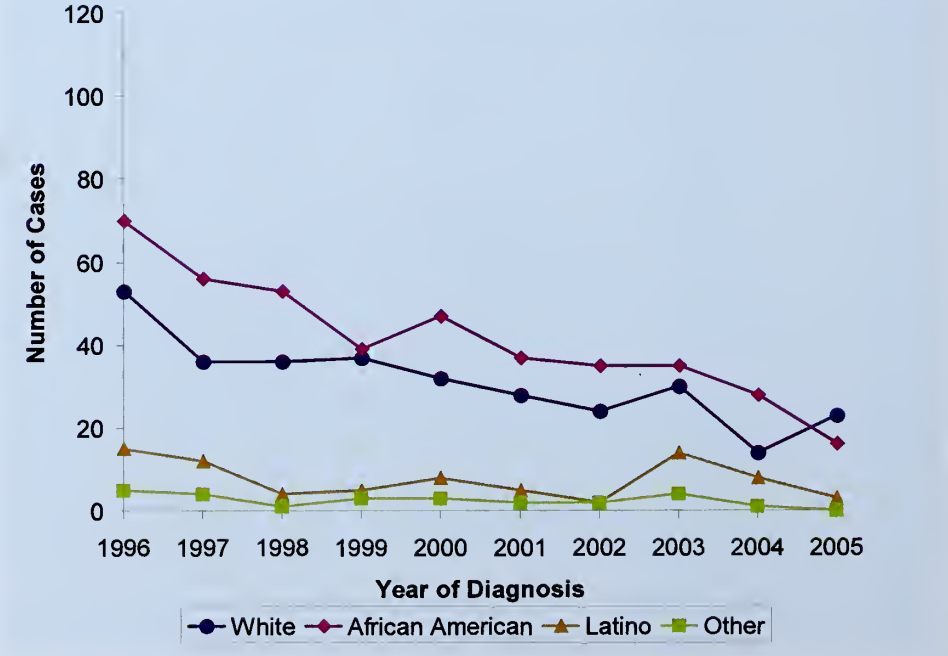


Table 9.1 shows the risk and race/ethnicity distribution of AIDS cases directly or indirectly associated with injection drug use. MSM IDU account for the majority (64%) of IDU-associated AIDS cases followed by male heterosexual IDU (22%). Of the MSM IDU cases, 71% are white and 16% are African American. This differs markedly from the heterosexual male and female IDU AIDS cases in which 50% and 53% respectively, are African American.

Table 9.1 Injection drug use-associated AIDS cases by exposure category and race/ethnicity, diagnosed through December 2005, San Francisco

		Race/Ethnicity Distribution by Percent			
Exposure Category	Total Number	White	African American	Latino	Other
Male heterosexual IDU	1,335	36%	50%	12%	2%
Female heterosexual IDU	638	33%	53%	10%	5%
MSM IDU	3,863	71%	16%	10%	3%
Lesbian IDU	43	49%	33%	12%	7%
Heterosexual contact with IDU	141	35%	42%	15%	9%
Children whose mothers are IDUs or mother's sex partners are IDUs	23	22%	43%	17%	17%

HIV behavioral data

National Behavioral Surveillance Survey

Injection drug users (IDU) are at high-risk of becoming infected with HIV through sharing injection equipment or by engaging in unprotected sex with HIV-infected persons. In 2005, National HIV Behavioral Surveillance Survey sampled IDU. Data on a total of 569 injection drug users in San Francisco were acquired through respondent-driven sampling (RDS) in which IDU were interviewed and then asked to recruit up to three members of their social network who also inject drugs. RDS analysis provided estimates for the entire IDU population from data collected during sampling.

Overall, the self-reported HIV infection rate among IDU in San Francisco is high (13.8%). Nearly half had at least one act of unprotected sex in the last six months, and many (30.3%) inject with a needle that has been used by someone else at least half the time (Table 9.2). Needle exchange programs were the most common source of needles for IDU; 81% had received needles from a needle exchange site in the last 12 months (Table 9.3).

Table 9.2 Estimated proportion of injection drug users engaging in risk behaviors, the National Behavioral Surveillance Survey, San Francisco, 2005

Variable	Proportion
Drug use (at least once a month)	
Methamphetamines	37.7%
Heroin	37.3%
Speedball	28.2%
Cocaine	21.6%
Crack	8.8%
Needle sharing[1]	
Shared needles half the time	30.3%
Never shared needles	19.5%
Always shared needles	0.6%
Sexual behavior	
Unprotected sex[2]	48.6%
Traded sex for goods[3]	6.0%

1 Inject with needles that may have been used by someone else in the past 12 months.
2 Any unprotected vaginal or anal sex with at least one of 5 most recent partners in the last 6 months.
3 Any sexual partnership where at least one partner received money or other goods in exchange for sex.

Table 9.3 Estimated proportion of injection drug users engaging in protective behaviors, the National Behavioral Surveillance Survey, San Francisco, 2005

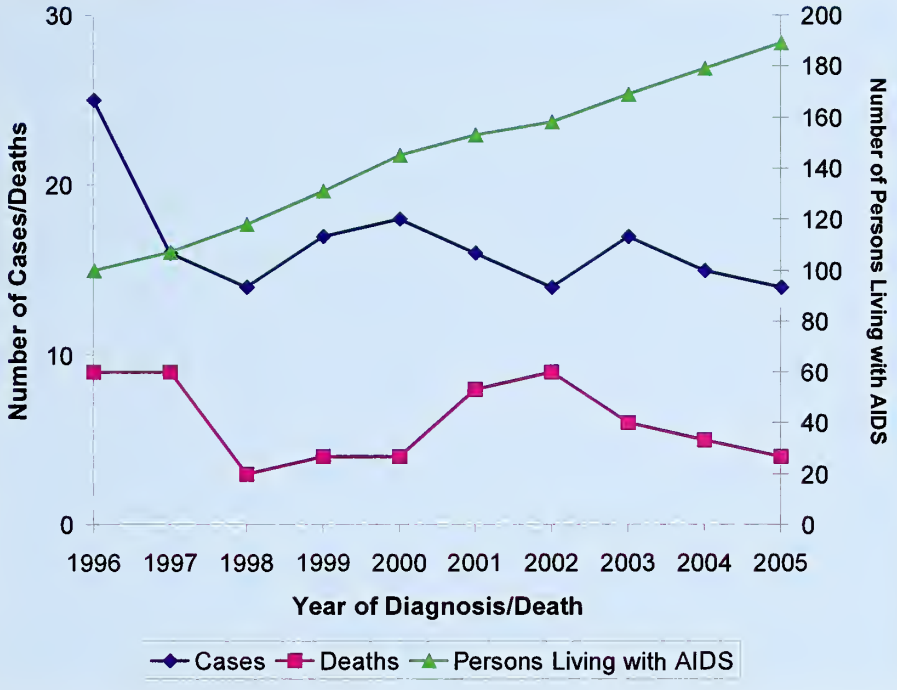
Protective behavior	Proportion
Source of clean needles in last 12 months	
Needle Exchange	81.0%
Friend	66.0%
Dealer	45.7%
Pharmacy	17.4%
Ever tested for HIV	97.4%
Tested in the last 12 months	76.1%
Ever been in detoxification	66.8%

10 HIV/AIDS among Heterosexuals

AIDS surveillance data

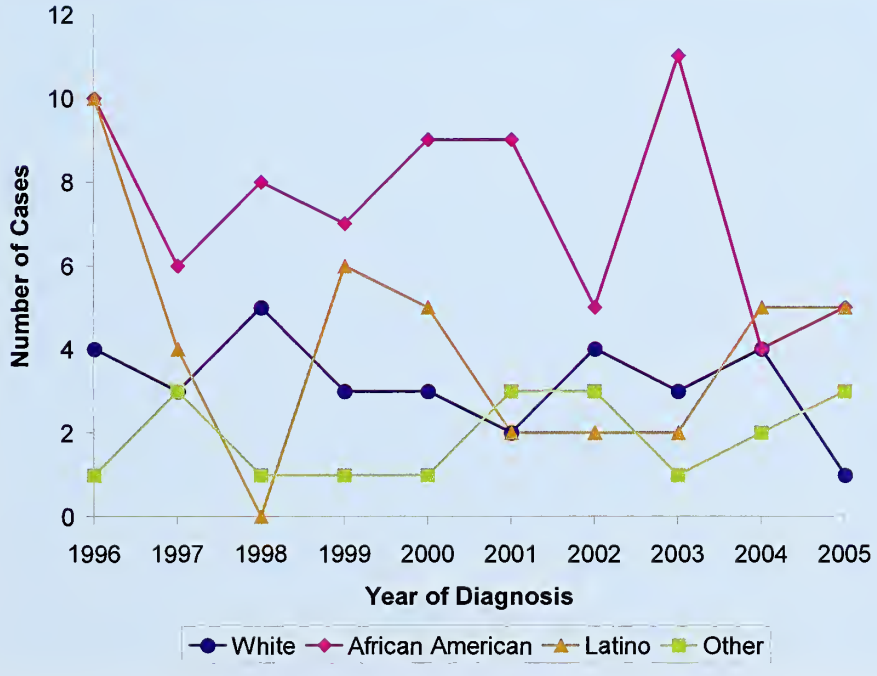
The number of AIDS cases among persons who acquired HIV infection through heterosexual contact is small relative to other risk groups. The number of new AIDS cases in this group has declined (Figure 10.1). The number of deaths among heterosexual non-IDU has also declined. The number of heterosexual non-IDU living with AIDS has increased to a total of 189 by December 31, 2005.

Figure 10.1 AIDS cases, deaths, and prevalence among heterosexuals, San Francisco, 1996-2005



Trends in heterosexual AIDS cases by race/ethnicity fluctuate from year to year due to small numbers (Figure 10.2). Overall, African Americans account for the largest number of heterosexual AIDS cases since 1996.

Figure 10.2 AIDS cases among heterosexuals by race/ethnicity, San Francisco, 1996-2005



The majority of heterosexually acquired AIDS cases are women (Table 10.1). Among women in this risk group, sex with an IDU partner was the most frequent exposure category, while among men, sex with an HIV-infected partner of unknown risk was the most frequent exposure category.

Table 10.1 AIDS cases among heterosexuals by exposure category and gender, diagnosed through December 2005, San Francisco

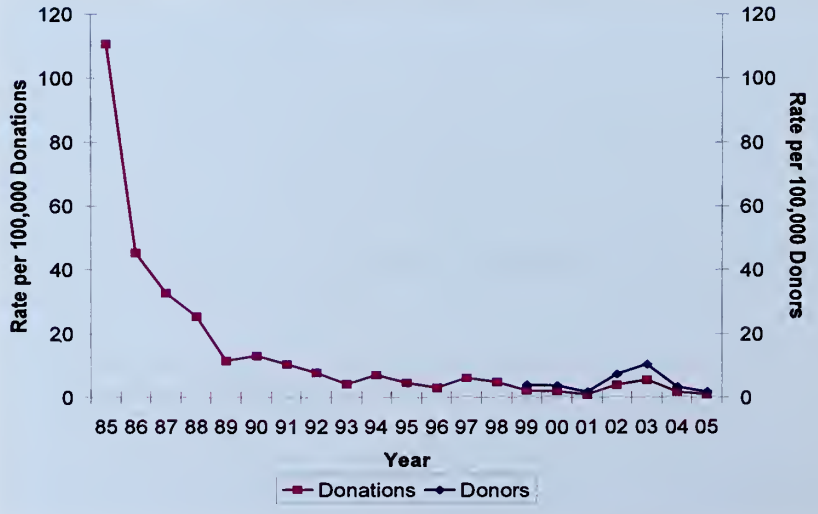
	Men		Women	
Exposure Category	**Number**	**%**	**Number**	**%**
Sex with injection drug user	33	35%	108	43%
Sex with bisexual men	N/A	N/A	44	17%
Sex with HIV+ transfusion recipient	<5	-	<5	-
Sex with HIV+ persons of unknown risk	58	62%	99	39%

HIV prevalence data

Blood Donations

HIV prevalence data among blood donations (keeping in mind that multiple donations can be made by one donor) are available from 1985 to 2005, and the data among individual donors are available from 1999 to 2005. The proportion of blood donors and blood donations testing HIV-positive has remained low and stable since the early 1990s (Figure 10.3). Blood donation is voluntary and donors are pre-screened for risk factors associated with HIV infection prior to giving blood. Although blood donors constitute a large population of heterosexual, non-injection drug users, interpretation of these data must take into account that only persons at lowest risk for HIV are encouraged to donate blood.

Figure 10.3 HIV prevalence rate among blood donations and donors through 2005, San Francisco Bay Area



Sexually transmitted diseases among heterosexuals

Figure 10.4 shows the annual number of primary, secondary, and early latent cases of syphilis among heterosexual men in San Francisco from 1997 through 2005. Data originate from case reporting from laboratories and health providers throughout the city, although the majority are patients seen at the municipal STD clinic. Compared to MSM, syphilis among heterosexual men remains relatively low in recent years.

Figure 10.4 Syphilis among heterosexual men, San Francisco, 1997-2005

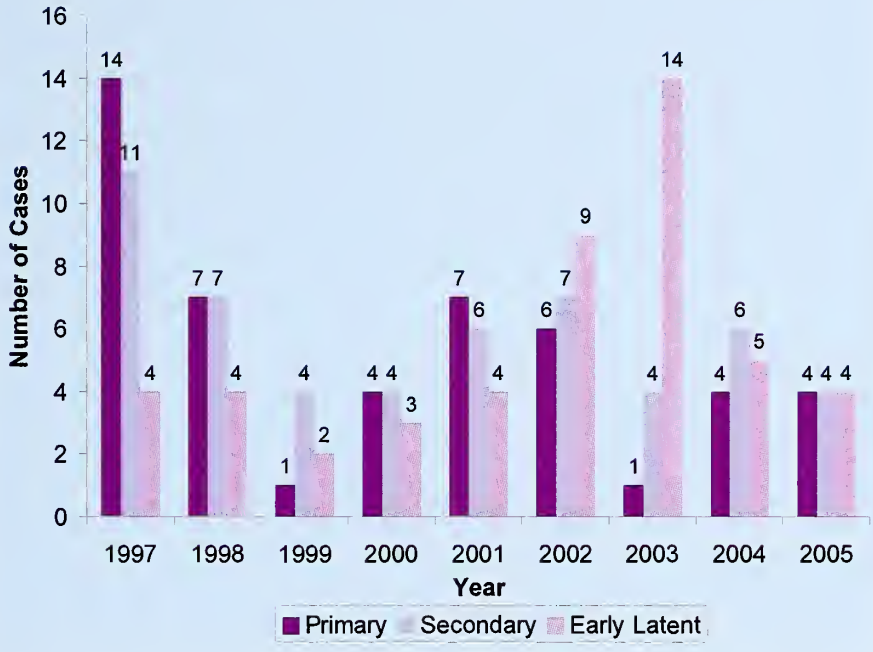
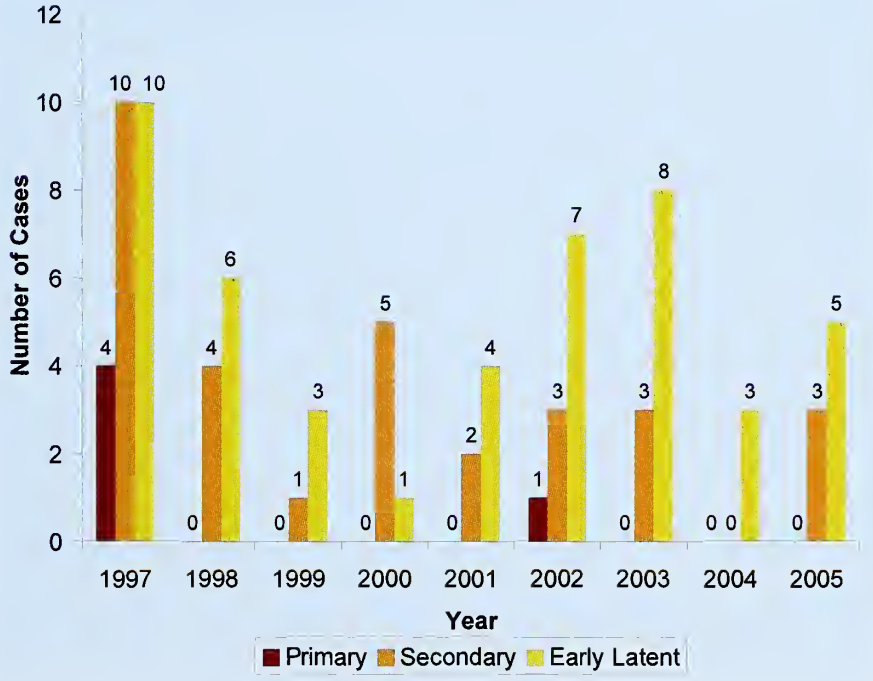


Figure 10.5 shows the annual number of primary, secondary, and early latent cases of syphilis among women in San Francisco from 1997 through 2005. Data originate from case reporting from laboratories and health providers throughout the city, although the majority are patients seen at the municipal STD clinic. Among women, syphilis cases are low and stable in recent years.

Figure 10.5 Syphilis among women, San Francisco, 1997- 2005

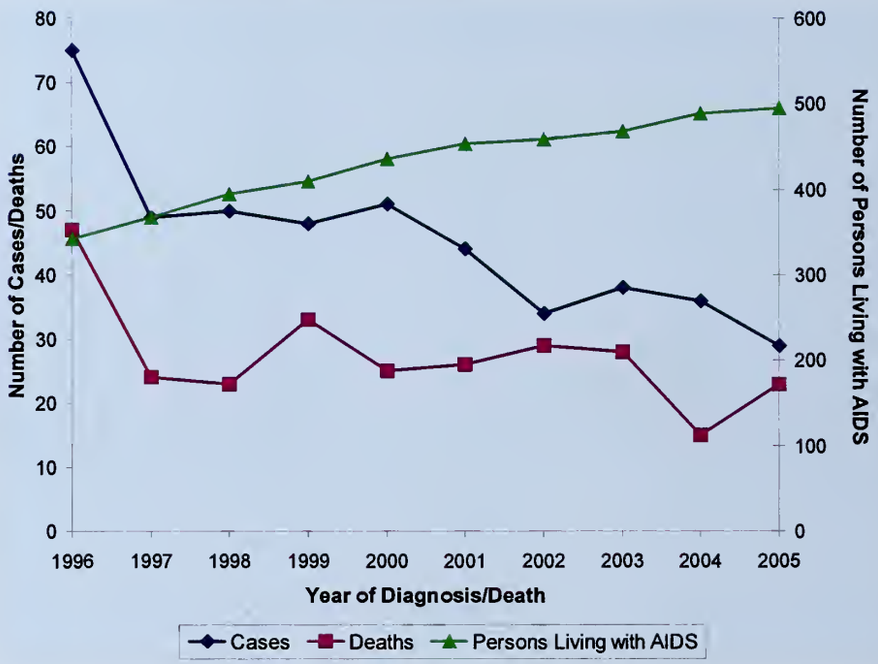


11 HIV/AIDS among Women

AIDS surveillance data

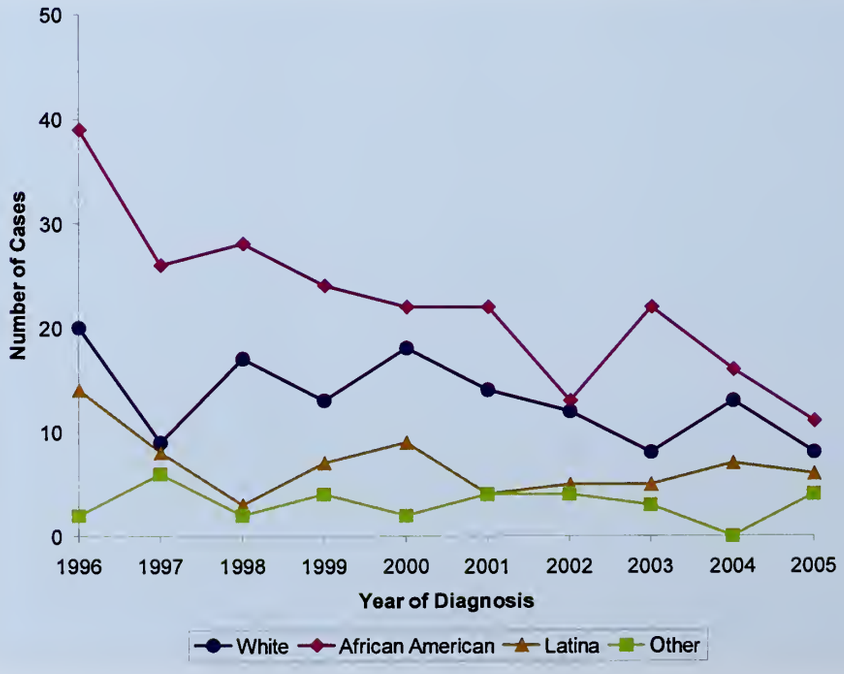
The number of AIDS cases and deaths among women in San Francisco has declined through 2005 (Figure 11.1). As of December 31, 2005 there were 495 women living with AIDS.

Figure 11.1 AIDS cases, deaths, and prevalence among women, San Francisco, 1996-2005



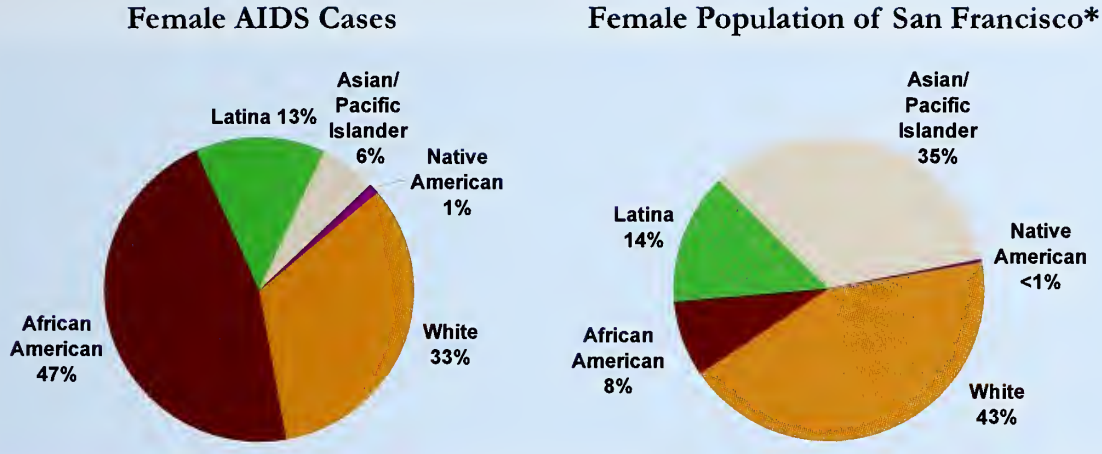
The number of new AIDS cases among African American women has been higher than women of other racial/ethnic groups between 1996 and 2005 (Figure 11.2).

Figure 11.2 Female AIDS cases by race/ethnicity, San Francisco, 1996-2005



African American women comprise a disproportionate percentage of women with AIDS in San Francisco. Among female AIDS cases, 47% occurred among African Americans even though African American women comprise only 8% of the San Francisco female population (Figure 11.3).

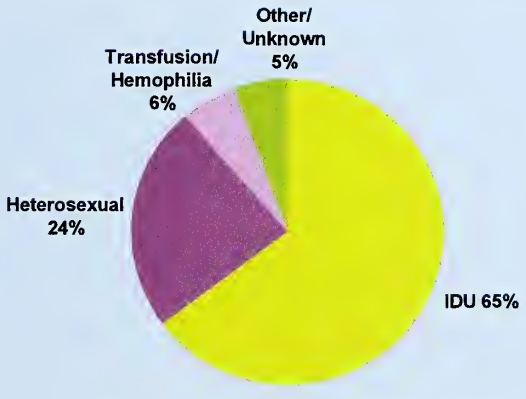
Figure 11.3 Female AIDS cases diagnosed through December 2005 and female population by race/ethnicity, San Francisco



* United States 2000 Census data.

Injection drug use (65%) is the most prominent risk exposure for women with AIDS, followed by heterosexual contact (24%) (Figure 11.4).

Figure 11.4 Female AIDS cases diagnosed through December 2005 by exposure category, San Francisco



12 HIV/AIDS among Adolescents and Young Adults

AIDS surveillance data

As of December 31, 2005, a cumulative total of 33 adolescents (age 13-19 years) and 527 young adults (aged 20-24 years) were diagnosed with AIDS in San Francisco (Table 12.1). The characteristics of young adults with AIDS are similar to other adults; the majority are MSM, white, and male. In both adolescents and young adults, MSM IDU is the second most frequent risk group.

Table 12.1 Adolescent and young adult AIDS cases by exposure category, gender, and race/ethnicity, diagnosed through December 2005, San Francisco

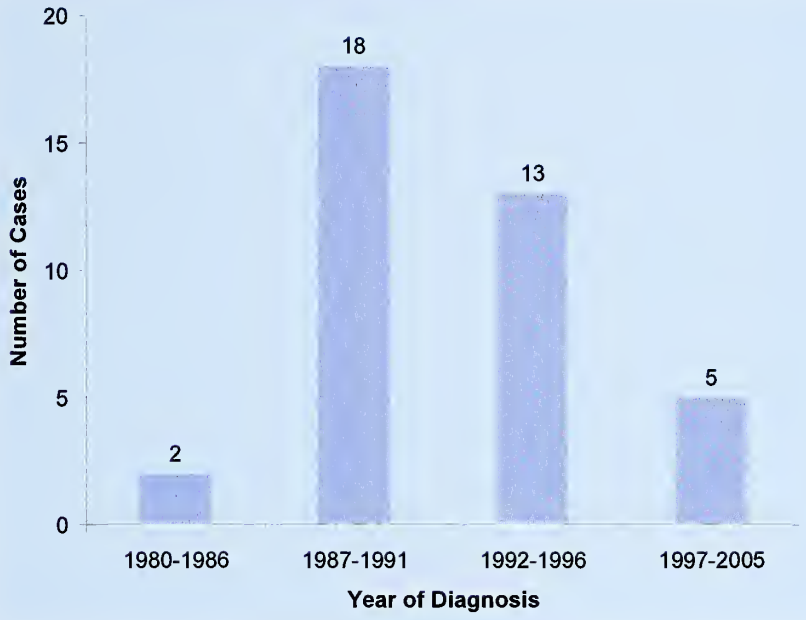
	13-19 Years Old (N=33)	20-24 Years Old (N=527)
Exposure Category		
MSM	39%	58%
IDU	0%	10%
MSM IDU	27%	27%
Transfusion/Hemophilia	9%	1%
Heterosexual	12%	4%
Perinatal	3%	0%
Other/Unknown	9%	1%
Gender		
Male	88%	93%
Female	12%	7%
Race/Ethnicity		
White	30%	59%
African American	3%	15%
Latino	58%	20%
Asian/Pacific Islander	3%	5%
Native American	6%	1%

13 HIV/AIDS among Children

AIDS surveillance data

As of December 31, 2005, a cumulative total of 38 pediatric AIDS cases (less than 13 years old) were diagnosed and resided in San Francisco at the time of diagnosis. The first pediatric case was diagnosed in San Francisco in 1980 and there were only two cases diagnosed before 1987 (Figure 13.1). The number of new pediatric AIDS cases peaked between 1987 and 1991. Between 1992 and 1996 there were 13 pediatric AIDS cases, and five pediatric cases were diagnosed between 1997 and 2005.

Figure 13.1 Pediatric AIDS cases by year of diagnosis, San Francisco, 1980-2005



Data collected on pediatric AIDS cases show that, as of December 2005, 24 cases are deceased. The majority of living pediatric AIDS cases are children of a high-risk or AIDS-diagnosed parent. Living pediatric AIDS cases are entirely children of color (Table 13.1).

Table 13.1 Living pediatric AIDS cases by exposure category, gender, and race/ethnicity, diagnosed through December 2005, San Francisco

	N= 14
Exposure Category	
Transfusion/Hemophilia	7%
Child of High Risk/AIDS parent	93%
Gender	
Male	43%
Female	57%
Race/Ethnicity	
White	0%
African American	29%
Latino	36%
Asian/Pacific Islander	21%
Native American	7%

Perinatal HIV data

Data on children with HIV in San Francisco are gathered through the Pediatric Spectrum of Disease (PSD) project. The PSD project was established in 1989 by the Centers for Disease Control and Prevention and collects data from eight areas throughout the United States. In Northern California, hospital surveillance for children under 13 years old infected with HIV or infants born to infected mothers has occurred at eight pediatric hospitals (including University of California at San Francisco and San Francisco General Hospital). Records from HIV positive pediatric patients cared for through the California Children's Services program, a state agency providing funding and case management for HIV-positive children, are also included in the PSD project. Data presented here include infants who were San Francisco residents and born to mothers documented to have HIV before delivery without a history of blood or blood product transfusion before 1985.

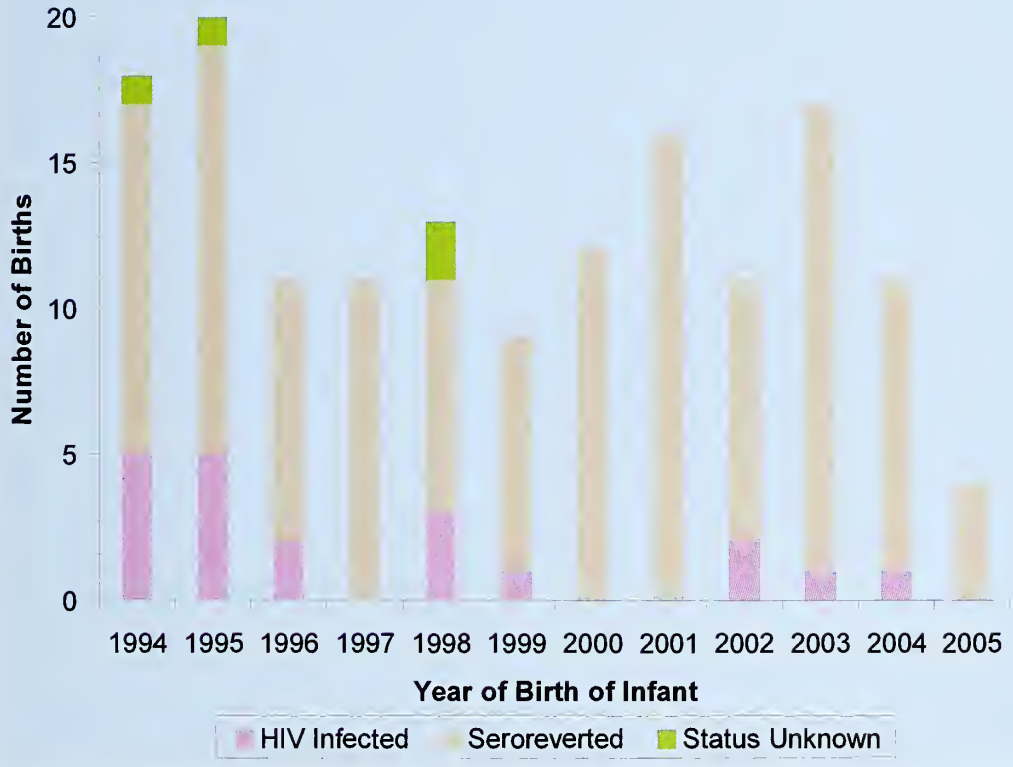
Through December 31, 2005, 290 infants were born to HIV-infected mothers who were residents of San Francisco (Table 13.2). Sixty-one (21%) of these infants were confirmed to be HIV-infected, 218 (75%) seroreverted (were determined to be uninfected after maternal antibodies disappeared), and 11 (4%) were of unknown serostatus. Of the 61 HIV-infected infants, nine are living with AIDS, 30 are living with HIV non-AIDS, and 22 have died of AIDS. Fifty-two percent of perinatally exposed infants were African American, while whites and Latinos each accounted for 19% of these infants.

Table 13.2 Infants born to HIV-infected mothers by infant HIV status and race/ethnicity, San Francisco, December 2005

	N (%)
Total	**290**
Infant HIV Status	
HIV-infected	61 (21)
AIDS (alive)	9 (3)
AIDS (dead)	22 (8)
HIV only (alive)	30 (10)
HIV only (dead)	0 (0)
Seroreverted (HIV-)	218 (75)
Unknown	11 (4)
Race/Ethnicity	
White	56 (19)
African American	151 (52)
Latino	55 (19)
Asian/Pacific Islander	20 (7)
Other/Unknown	8 (3)

The number of perinatally exposed infants who were confirmed as HIV-infected has remained low since 1996 (Figure 13.2). Declines in perinatal transmission of HIV are due to the improved therapies for mothers throughout pregnancy and for infants to prevent perinatal transmission. In 2005, four infants born to HIV-infected mothers have been reported so far; all have seroreverted.

Figure 13.2 Infants born to HIV-infected mothers by year of birth and infant HIV status, San Francisco, 1994-2005



14 HIV/AIDS among Transgender Persons

HIV/AIDS surveillance data

Persons are categorized as transgender if information regarding gender identity is present in the medical record. Information on transgender status has been collected since 1996. As of December 31, 2005, a total of 458 transgender HIV (non-AIDS) and AIDS cases were diagnosed (Table 14.1). Seventy-four percent of transgender cases were non-white compared to 29% of total HIV (non-AIDS) and AIDS cases. Transgender persons were more likely to inject drugs and be younger compared to all HIV (non-AIDS) and AIDS cases.

Table 14.1 Characteristics of transgender* HIV/AIDS cases and cumulative HIV/AIDS cases diagnosed through December 2005, San Francisco

	Transgender HIV/AIDS Cases Diagnosed Through December 2005		All HIV/AIDS Cases Diagnosed Through December 2005	
Total	458		32,794	
Race/Ethnicity				
White	117	26%	23,150	71%
African American	161	35%	4,277	13%
Latino	127	28%	3,863	12%
Other/Unknown	53	11%	1,504	4%
Injection Drug Use				
Yes	241	53%	6,999	21%
No	217	47%	25,795	79%
Age at Diagnosis				
13 - 29	127	28%	4,343	14%
30 - 39	201	44%	14,841	45%
40 - 49	106	23%	9,951	30%
50+	24	5%	3,659	11%

* See Technical Notes "Transgender Status."

15 HIV/AIDS among Homeless Persons

AIDS surveillance data

A case is classified as homeless if, at the time of AIDS diagnosis, the medical record states that the patient is homeless or the patient's address is one of the following: (1) a known homeless shelter, (2) a health care clinic, or (3) a free postal address not connected to a residence ('general delivery'). Persons for whom information on residence is missing are not classified as homeless. The proportion of homeless AIDS cases increased between 1996 and 2000, and declined between 2000 and 2005 (Figure 15.1). For 2005, 10% of AIDS cases were homeless at the time of diagnosis.

Compared to the total number of AIDS cases diagnosed between 1996 and 2005, homeless persons with AIDS were more likely to be women, African American, injection drug users (including MSM IDU), and younger (Table 15.1).

Figure 15.1 Number and percent of homeless AIDS cases by year of diagnosis, San Francisco, 1996-2005

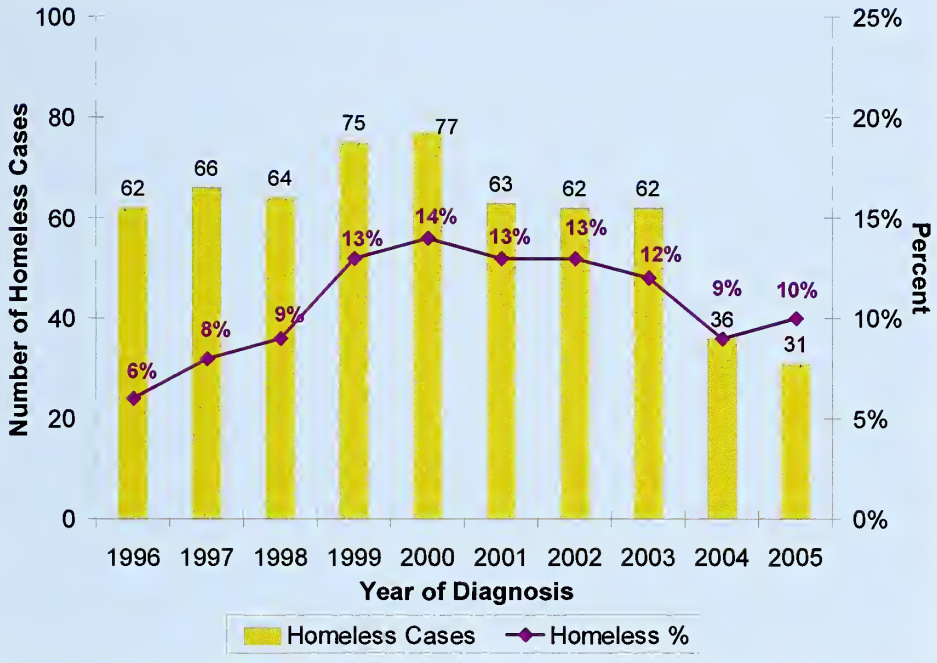


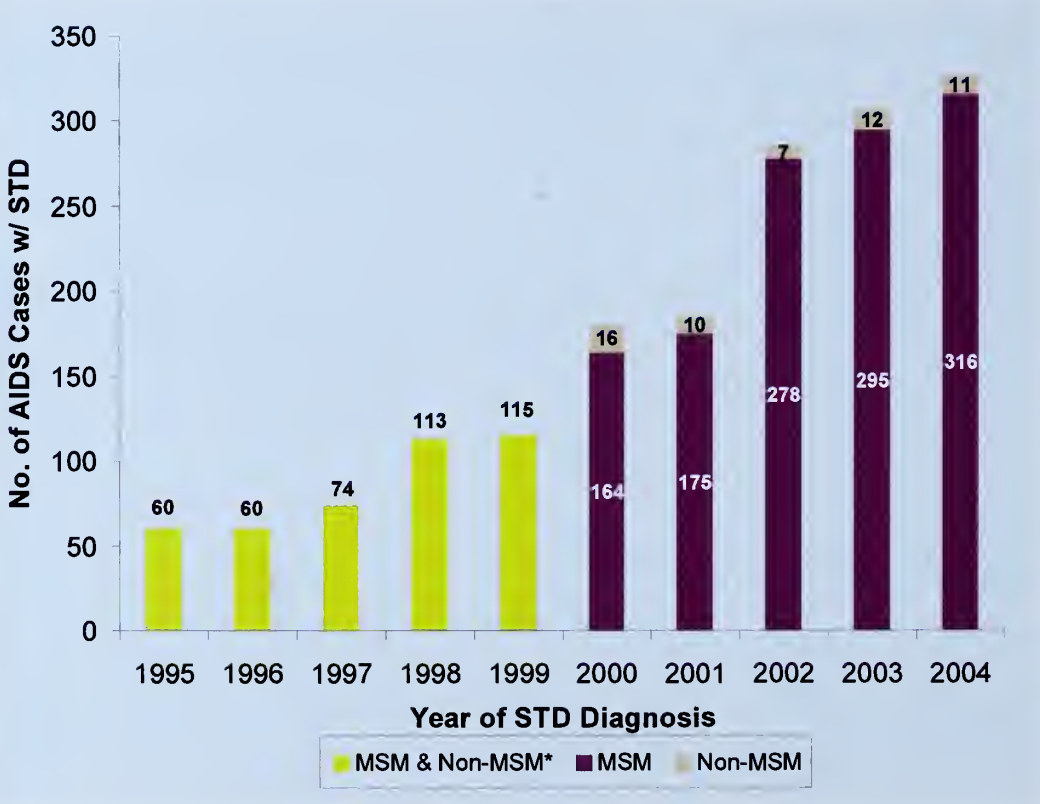
Table 15.1 Characteristics of homeless AIDS cases and AIDS cases diagnosed between 1996 and 2005, San Francisco

	Homeless AIDS Diagnosed 1996-2005 (N=598)	AIDS Cases Diagnosed 1996-2005 (N=5,330)
Gender		
Male	85%	92%
Female	15%	8%
Race/Ethnicity		
White	42%	60%
African American	40%	19%
Latino	15%	16%
Other	3%	6%
Exposure Category		
MSM	21%	65%
IDU	42%	14%
MSM IDU	32%	16%
Heterosexual	3%	3%
Other	2%	2%
Age at Diagnosis		
0 - 19	1%	<1%
20 - 29	13%	9%
30 - 39	39%	41%
40 - 49	36%	34%
50+	11%	15%

16 Sexually Transmitted Diseases among Persons with AIDS

Diagnosis of sexually transmitted diseases (STD) occurring among persons with AIDS was determined through a computerized match of the AIDS and STD case registries through 2004. A match was verified by name, date of birth, and gender. The STD registry included persons reported with gonorrhea, chlamydia, non-gonococcal urethritis, or infectious syphilis. Cases of STDs among persons with AIDS have steadily risen since 1995 with a dramatic jump in 2002 (Figure 16.1). This jump in STDs among persons with AIDS could be expected due to steep increases in male rectal gonorrhea (see Figure 8.5) and syphilis (see Figure 8.6), particularly among MSM, reported in 2002. All STDs occurred after the AIDS diagnosis, indicating unprotected sex among persons known to be HIV-infected.

Figure 16.1 Number of AIDS cases diagnosed with an STD by year of STD diagnosis, San Francisco, 1995-2004



* Prior to 2000, data for MSM and non-MSM was not separated.

17 Late HIV Testing

Persons diagnosed late in the course of HIV infection may be unknowingly transmitting infection and, once diagnosed, may have worse outcomes and greater medical expenses. We examined HIV testing histories of persons diagnosed with AIDS in San Francisco to determine the prevalence, trends, and characteristics of persons who were diagnosed with HIV late in the course of disease. Late testers were defined as persons whose diagnosis of HIV occurred 12 months or less before their AIDS diagnosis. Almost 40% of AIDS cases diagnosed between 2001 and 2005 were late testers and this proportion has not declined in recent years (Table 17.1). Late testing was more likely among younger persons, heterosexuals, persons without a reported risk, persons without health insurance, born outside of the USA, and whose initial AIDS diagnosis was an opportunistic infection. Characteristics of late testers suggest that these people may not be aware of their risk for HIV infection or may not have sufficient access to testing services.

Table 17.1 Characteristics of late HIV testers, San Francisco, 2001-2005

Characteristic	Total Number	Late tester Number	(%)
Total	**2139***	**830**	(38.8)
Gender			
Female	174	71	(40.8)
Male	1,894	733	(38.7)
Transgender	71	26	(36.6)
Age group (years)			
13-29	186	106	(57.0)
30-39	793	297	(37.5)
40-49	757	275	(36.3)
50+	403	152	(37.7)
Race/Ethnicity			
White	1,191	411	(34.5)
African American	397	162	(40.8)
Hispanic	402	180	(44.8)
Other	149	77	(51.7)
Risk group			
MSM	1,353	527	(39.0)
IDU	300	115	(38.3)
MSM IDU	340	94	(27.7)
Heterosexual	75	44	(58.7)
No reported risk	71	50	(70.4)
Insurance at time of AIDS diagnosis			
Public	564	163	(28.9)
Private	849	340	(40.0)
None	726	327	(45.0)
Homeless at time of AIDS diagnosis	238	92	(38.7)
Country of birth			
United States	1,743	635	(36.4)
Outside of USA	302	168	(55.6)
Unknown	94	27	(28.7)
Initial AIDS diagnosis			
Low CD4 count/percent	1,775	628	(35.4)
Opportunistic Illness	364	202	(55.5)
Year of AIDS Diagnosis			
2001	455	187	(41.1)
2002	450	170	(37.8)
2003	499	183	(36.7)
2004	413	161	(39.0)
2005	322	129	(40.1)

* Excludes two transfusion-associated cases and 40 cases with missing insurance information.

18 Substance Use

Substance use has been associated with HIV infection and HIV risk behavior. We present frequency of substance use among San Francisco MSM participants in the 2003-2004 National HIV Behavioral Surveillance (see Technical Notes, National Behavioral Surveillance). Data presented here is from the 1,574 MSM in the sample, of whom 559 (37%) reported no illicit substance use. The frequency of use in the past 12 months by HIV status is shown in Table 18.1.

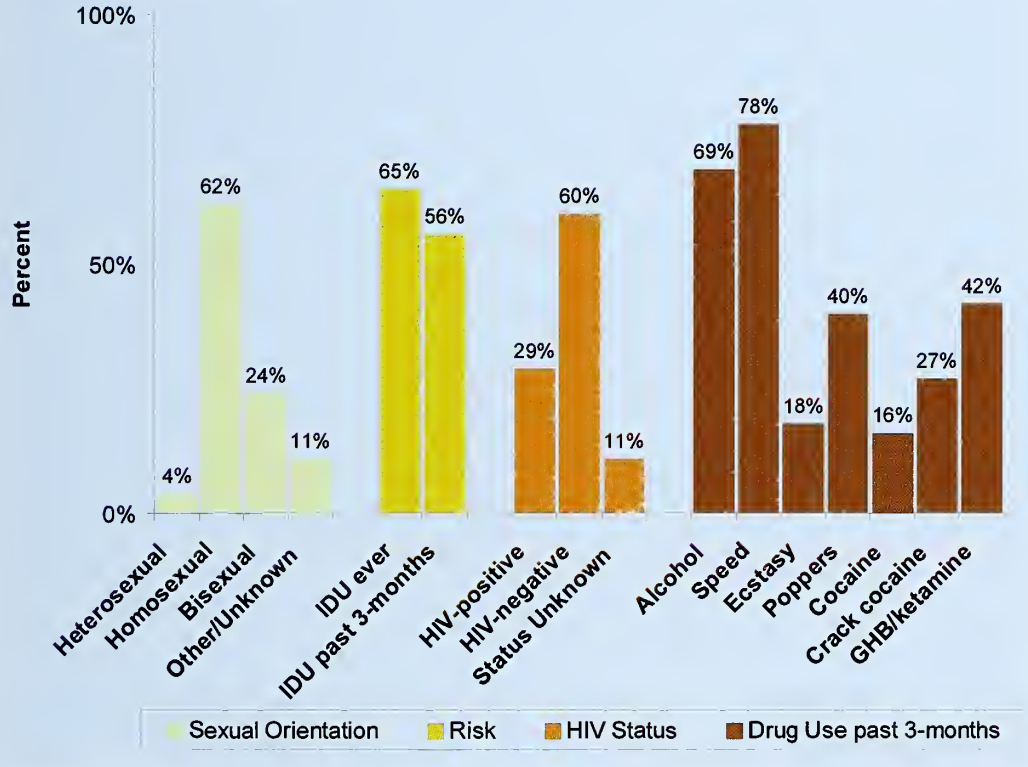
Table 18.1 Substance use among MSM, the National Behavioral Surveillance Survey, San Francisco, 2004-2005

	HIV(-)* (N =816)	HIV(+) (N =179)
Methamphetamine		
Once a month or less	14.0%	25.0%
About weekly	4.5%	8.8%
About daily	<1%	1.6%
None in past 12 months	81.5%	64.6%
Crack cocaine		
Once a month or less	2.3%	5.2%
About weekly	1.0%	1.2%
About daily	<1%	0.0%
None in past 12 months	96.7%	93.6%
Cocaine		
Once a month or less	14.2%	16.7%
About weekly	2.4%	1.2%
About daily	0.0%	<1%
None in past 12 months	83.4%	81.3%
Downers (includes valium, xanax)		
Once a month or less	6.2%	4.0%
About weekly	1.0%	2.0%
About daily	0.0%	1.0%
None in past 12 months	92.8%	93.0%
Pain killers (includes oxycontin, percocet)		
Once a month or less	5.4%	3.2%
About weekly	<1%	<1%
About daily	0.0%	<1%
None in past 12 months	94.6%	96.3%
Ecstasy		
Once a month or less	21.0%	18.0%
About weekly	1.5%	1.2%
About daily	0.0%	0.0%
None in past 12 months	78.5%	80.8%
Gamma Hydroxy Butyrate (GHB)/Ketamine		
Once a month or less	9.2%	9.2%
About weekly	1.0%	2.4%
About daily	0.0%	0.0%
None in past 12 months	89.8%	88.4%
Marijuana		
Once a month or less	23.0%	21.0%
About weekly	15.3%	21.0%
About daily	7.3%	13.5%
None in past 12 months	54.4%	44.5%
Poppers (nitric oxide)		
Once a month or less	14.3%	20.7%
About weekly	3.7%	8.8%
About daily	<1%	2.0%
None in past 12 months	82.0%	68.5%
Heroin		
Once a month or less	<1%	0.0%
About weekly	0.0%	0.0%
About daily	0.0%	0.0%
None in past 12 months	99.5%	100.0%

* HIV(-) included HIV negatives and unknown HIV status.

In 2004, the San Francisco Department of Public Health (SFDPH) conducted a late night survey of hard-to-reach MSM who were not being served through conventional HIV prevention programs that operate during normal business hours. This survey, called the Late Night Breakfast Buffet, provided harm reduction services in a mobile van and extended the hours of outreach to five o'clock in the morning. Harm reduction and prevention services incorporated intervention lessons learned from successful projects initiated by the SFDPH (i.e., the Party-n-Play study, behavioral surveillance, Neighborhood Health on Wheels [NHOW]) demonstrating the effectiveness of delivering services to hard-to-reach populations via mobile vans. Below are data showing the sexual orientation, HIV serostatus, and drug use of the sample recruited in 2004 (Figure 18.1).

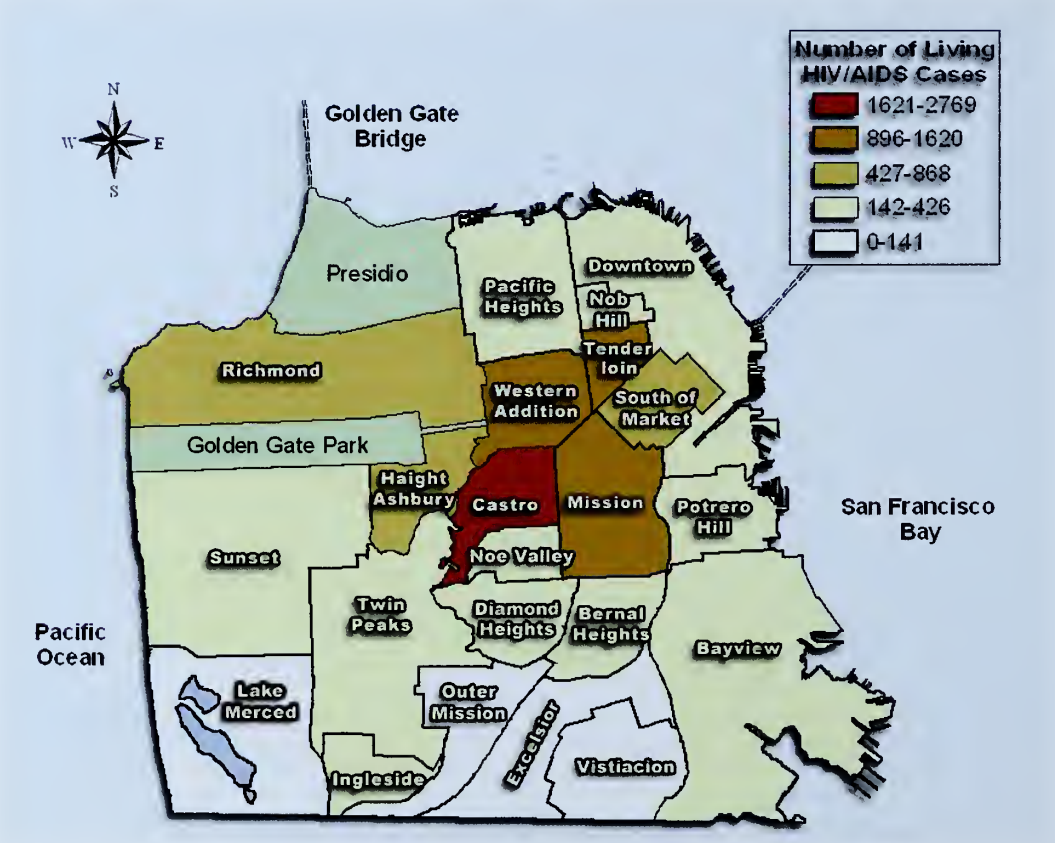
Figure 18.1 Late Night Breakfast Buffet Survey, San Francisco, 2004



19 Geographic Distribution of HIV/AIDS

Map 19.1 shows the geographic distribution of persons living with HIV/AIDS by neighborhood in San Francisco. Data include persons who were residents of San Francisco at the time of either their HIV non-AIDS or AIDS diagnosis and who were known to be alive on December 31, 2005. The most severely-affected neighborhoods are the Castro, Mission, Tenderloin and Western Addition. The adjacent areas including South of Market, Haight Ashbury and the western side of the Richmond, also have large numbers of persons living with HIV/AIDS.

Map 19.1 Distribution of persons living with HIV/AIDS by neighborhood, San Francisco, December 2005



Technical Notes

HIV/AIDS Surveillance Methods

San Francisco HIV/AIDS cases are reported primarily through active surveillance activities in which public health personnel review laboratory and pathology reports and medical records to identify cases and complete the case report forms. HIV/AIDS cases are also identified through passive reporting, review of death certificates, validation studies using secondary data sources such as hospital billing records or other disease registries, and reports from other health departments. The surveillance system is evaluated regularly for completeness, timeliness, and accuracy. AIDS case reporting has found to be very complete (over 95%) while HIV case reporting is less complete due to an immature reporting system.

AIDS Incidence Rates

Annual race-specific rates are calculated as the number of cases diagnosed for a particular race/ethnic group during each year divided by the population for that race/ethnicity, multiplied by 100,000. These rates are calculated separately for males and females. The annual populations are not available for transgenders. Population denominators for the years 1996-2005 are obtained from the State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 1990-1999 and 2000-2050 data files, May 2004 (www.dof.ca.gov).

AIDS Survival

Survival was calculated as the time between the date of initial AIDS diagnosis and the date of death. This includes persons with low CD4 (count<200 or percent<14%) and persons diagnosed with AIDS opportunistic illnesses. The follow-up information of cases was obtained through retrospective and prospective reviews of laboratory records and medical charts. Dates of death were obtained through review of local death certificates, reports from the State Office of AIDS, and matches with the National Death Index (NDI). The most recent NDI match included deaths that occurred through December 31, 2003. Persons not known to have died were censored at the date of their last known follow-up or at December 31, 2003, whichever was more recent.

Causes of Death

Cause of death information on death certificates is coded using the International Classification of Diseases, 10th revision (ICD-10) for deaths occurring in 1999 or after, and the 9th revision (ICD-9) for deaths occurring prior to 1999. These codes are then processed and evaluated using a computer system to determine the underlying and contributory causes of death (www.cdc.gov/nchs/about/major/dvs/im.htm). We obtained the ICD coded causes of death from the California multiple-cause-of-death computer tape for persons with AIDS who died prior to 1996. For AIDS deaths that occurred in 1996 and after, the cause

of death information was obtained through the match with the National Death Index. Deaths attributable to HIV infection or AIDS are coded as 042-044 under ICD-9 and B20-B24 under ICD-10. In addition, the AIDS opportunistic illnesses, if listed on death certificates, are included in the category of "HIV/AIDS" cause of death.

Grouping of Data Categories

Data regarding certain racial/ethnic or risk categories are grouped together when the number of persons with HIV/AIDS in that particular group is small and/or does not present significant trends. For example, "Other" in the Race/Ethnicity breakdown represents Asian/Pacific Islander, Native American and people of mixed race; "Other" in the Exposure Category breakdown may include transfusion, hemophilia, heterosexual, perinatal AIDS, or persons of unidentified risk.

National Behavioral Surveillance

In 2003, the CDC initiated a national behavioral surveillance system in the largest US metropolitan areas. Each year, a survey is conducted among one of the populations at highest risk for HIV. In 2003-2004, MSM were surveyed using a Time-Space Sampling methodology. The methodology entails construction of a list of venues (e.g., gay bars, dance clubs, parks, neighborhoods, etc.) where MSM are concentrated in high numbers. Using this list, venues are selected at random for recruitment of MSM. Persons attending the venues are approached, assessed for eligibility, and invited to participate in an anonymous survey on HIV-related behavior. A sub-sample was also invited to test for HIV. Limitations of the approach include potential selection biases in who attends the venues and who elects to do the survey. In 2004-2005, IDU were surveyed using Respondent-Driven Sampling. The method entails using IDU participants to recruit up to three other IDU. Data analysis adjusts for recruitment patterns.

Transgender Status

In September 1996, the San Francisco Department of Public Health began noting transgender status when this information is contained in the medical record. Transgender individuals are listed as either male-to-female or female-to-male. The majority of transgender HIV/AIDS cases are male-to-female. There are less than five female-to-male transgender cases reported in the case registry. Please note that there are several limitations to our transgender data. We believe that our report likely underestimates the number of transgender persons affected by HIV/AIDS because data collected for HIV/AIDS reporting are derived from the medical record. Consequently, information that may be discussed with the health care provider but not recorded in the medical record is generally not available for the purposes of HIV/AIDS case reporting. Because information about transgender status was not collected in a uniform way until September 1996, we have limited data on transgender cases prior to this, and therefore cannot perform valid time trend analysis for this group.

D Data Tables

Figure 1.1 AIDS cases, deaths, and prevalence, San Francisco, 1980-2005 3

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Cases	3	26	99	274	557	859	1236	1629	1762	2161	2048	2281	2327
Deaths	0	8	32	111	272	531	807	876	1036	1273	1362	1495	1633
Persons Living with AIDS	3	21	88	251	536	864	1293	2046	2772	3660	4346	5132	5826

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cases	2074	1784	1561	1079	807	691	577	547	499	481	514	423	310
Deaths	1584	1584	1475	981	413	395	352	340	318	316	297	224	228
Persons Living with AIDS	6316	6516	6602	6700	7094	7390	7615	7822	8003	8168	8385	8584	8666

Figure 2.1 Number of AIDS cases by race/ethnicity, San Francisco, 1996-2005 . . .7

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
White	674	516	443	338	318	290	288	261	235	172
African American	194	146	140	104	110	99	83	102	72	57
Latino	160	110	77	103	86	70	74	112	92	61
Other	51	35	31	32	33	40	36	39	24	20

Figure 2.2 Male annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1996-2005 8

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
White	367	282	234	177	160	147	147	133	117	87
African American	426	354	340	237	259	244	223	253	178	148
Latino	251	170	125	158	125	107	107	161	136	84
Other	39	24	23	22	23	27	23	28	17	12

Figure 2.3 Female annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1996-2005 8

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
White	13	6	11	8	11	9	7	5	8	5
African American	115	78	86	75	71	73	43	73	54	37
Latina	28	16	6	14	17	8	9	9	13	11
Other	2	5	2	3	1	3	3	2	0	3

Figure 2.4 Number of male AIDS cases by exposure category, San Francisco, 1996-2005 9

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MSM	709	551	440	351	328	304	298	324	273	181
IDU	89	76	61	49	53	43	41	59	25	25
MSM IDU	151	100	118	90	82	71	77	53	61	47
Other	21	11	6	21	12	24	15	18	15	20

Figure 2.5 Number of female AIDS cases by exposure category, San Francisco, 1996-2005 9

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
IDU	53	31	33	35	35	29	22	24	26	17
Heterosexual	19	13	13	11	14	10	9	11	7	9
Other	3	5	4	2	2	5	3	3	3	3

Figure 7.1 Trends in insurance status among persons with AIDS by gender, San Francisco, 2000-2005 20

Male	2000	2001	2002	2003	2004	2005
Public	16%	18%	21%	22%	25%	29%
Private	40%	43%	42%	43%	46%	43%
None	38%	35%	34%	35%	27%	26%

Female	2000	2001	2002	2003	2004	2005
Public	55%	59%	38%	55%	64%	55%
Private	14%	16%	12%	11%	3%	17%
None	25%	20%	44%	32%	31%	28%

Transgender	2000	2001	2002	2003	2004	2005
Public	38%	31%	25%	36%	62%	50%
Private	5%	0%	13%	5%	0%	0%
None	48%	69%	56%	55%	38%	50%

Figure 8.1 AIDS cases, deaths, and prevalence among MSM, San Francisco, 1996 - 2005 21

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cases	893	669	574	459	429	388	391	399	347	236
Deaths	857	337	319	281	276	245	244	227	167	163
Persons Living with AIDS	5891	6223	6478	6656	6809	6952	7099	7271	7451	7524

Figure 8.2 AIDS cases among MSM by race/ethnicity, San Francisco, 1996-2005 . .21

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
White	609	474	400	294	281	256	256	227	216	143
African American	111	77	75	55	52	46	40	51	35	31
Latino	129	92	72	83	69	56	65	93	76	50
Other	44	26	27	27	27	30	30	28	20	12

Figure 8.3 Percent of MSM reporting unprotected anal intercourse by self-reported HIV status in the last six months, the Stop AIDS Project, San Francisco, 1998-2005 22

	1998	1999	2000	2001	2002	2003	2004	2005
HIV Positive	38%	42%	46%	51%	45%	53%	54%	46%
HIV Negative	34%	32%	36%	37%	32%	37%	33%	37%

Figure 8.4 Percent of MSM reporting unprotected anal intercourse with at least one partner of unknown HIV status in the last six months, the Stop AIDS Project, San Francisco, 1998-2005 22

	1998	1999	2000	2001	2002	2003	2004	2005
HIV Positive	22%	25%	25%	31%	27%	28%	21%	9%
HIV Negative	12%	15%	17%	20%	16%	8%	4%	12%

Figure 8.6 Syphilis among MSM, San Francisco, 1997-2005 27

	1997	1998	1999	2000	2001	2002	2003	2004	2005
Primary	2	3	3	13	45	97	105	117	71
Secondary	13	2	19	27	72	191	213	204	145
Early Latent	2	4	10	12	38	151	160	173	155

Figure 9.1 AIDS cases, deaths, and prevalence among non-MSM IDU, San Francisco, 1996-2005 28

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cases	143	108	94	84	90	72	63	83	51	42
Deaths	102	62	65	64	51	60	58	60	45	52
Persons Living with AIDS	627	673	702	722	761	773	778	801	807	797

Figure 9.2 AIDS cases among non-MSM IDU by race/ethnicity, San Francisco, 1996-2005 28

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
White	53	36	36	37	32	28	24	30	14	23
African American	70	56	53	39	47	37	35	35	28	16
Latino	15	12	4	5	8	5	2	14	8	3
Other	5	4	1	3	3	2	2	4	1	0

Figure 10.1 AIDS cases, deaths, and prevalence among heterosexuals, San Francisco, 1996-2005 31

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cases	25	16	14	17	18	16	14	17	15	14
Deaths	9	9	3	4	4	8	9	6	5	4
Persons Living with AIDS	100	107	118	131	145	153	158	169	179	189

Figure 10.2 AIDS cases among heterosexuals by race/ethnicity, San Francisco, 1996 - 2005 31

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
White	4	3	5	3	3	2	4	3	4	1
African American	10	6	8	7	9	9	5	11	4	5
Latino	10	4	0	6	5	2	2	2	5	5
Other	1	3	1	1	1	3	3	1	2	3

Figure 10.3 HIV prevalence rate among blood donations and donors through 2005, San Francisco Bay Area 32

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
HIV prevalence rate per 100,000 donations	111	45	33	26	11	13	10	8	4	7	5

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
HIV prevalence rate per 100,000 donations	3	6	5	2	2	1	4	6	2	1
HIV prevalence rate per 100,000 donors	N/A	N/A	N/A	4	4	2	7	10	3	2

Figure 11.1 AIDS cases, deaths, and prevalence among women, San Francisco, 1996-2005 34

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cases	75	49	50	48	51	44	34	38	36	29
Deaths	47	24	23	33	25	26	29	28	15	23
Persons Living with AIDS	342	367	394	409	435	453	458	468	489	495

Figure 11.2 Female AIDS cases by race/ethnicity, San Francisco, 1996-2005 34

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
White	20	9	17	13	18	14	12	8	13	8
African American	39	26	28	24	22	22	13	22	16	11
Latina	14	8	3	7	9	4	5	5	7	6
Other	2	6	2	4	2	4	4	3	0	4

Figure 13.2 Infants born to HIV-infected mothers by year of birth and infant HIV status, San Francisco, 1994-2005 39

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
HIV Infected	5	5	2	0	3	1	0	0	2	1	1	0
Seroreverted	12	14	9	11	8	8	12	16	9	16	10	4
Status Unknown	1	1	0	0	2	0	0	0	0	0	0	0



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Contents

Contents i
List of Figures and Tables ii
Dear Colleague Letter vi
Executive Summary vii
1. Overview of HIV/AIDS in San Francisco 1
2. Trends in AIDS Incidence 6
3. Persons Living with HIV/AIDS 10
4. Survival among Persons with AIDS 14
5. Trends in HIV/AIDS Mortality 19
6. Use of Antiretroviral Therapy among Persons with AIDS 26
7. Insurance Status at Time of HIV/AIDS Diagnosis 28
8. HIV/AIDS among Men Who Have Sex with Men 30
9. HIV/AIDS among Injection Drug Users 34
10. HIV/AIDS among Heterosexuals 36
11. HIV/AIDS among Women 39
12. HIV/AIDS among Adolescents and Young Adults 41
13. HIV/AIDS among Children 42
14. HIV/AIDS among Transgender Persons 45
15. HIV/AIDS among Homeless Persons 46
16. Sexually Transmitted Diseases among Persons with AIDS 47
17. Late HIV Testing 48
18. Geographic Distribution of HIV/AIDS 50
Technical Notes 51
Data Tables 53

List of Figures and Tables

1. Overview of HIV/AIDS in San Francisco

Table 1.1 Characteristics of cumulative AIDS cases in San Francisco, California, and the United States 1

Table 1.2 Cumulative AIDS cases by gender, exposure category, and race/ethnicity, diagnosed through December 2006, San Francisco 2

Figure 1.1 AIDS cases, deaths, and prevalence, San Francisco, 1980-2006 3

Table 1.3 Characteristics of persons newly diagnosed with HIV between 2002 and 2006, San Francisco 4

Figure 1.2 HIV/AIDS prevalence, San Francisco, 2002-2006 5

2. Trends in AIDS Incidence

Figure 2.1 Number of AIDS cases by race/ethnicity, San Francisco, 1997-2006 6

Figure 2.2 Male annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1997-2006 7

Figure 2.3 Female annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1997-2006 7

Figure 2.4 Number of male AIDS cases by exposure category, San Francisco, 1997-2006 8

Figure 2.5 Number of female AIDS cases by exposure category, San Francisco, 1997-2006 8

Table 2.1 AIDS cases by gender and age at diagnosis, diagnosed 1996-2006, San Francisco 9

3. Persons Living with HIV/AIDS

Table 3.1 Trends in persons living with HIV/AIDS by demographic and risk characteristics, San Francisco, 2002-2006 10

Table 3.2 Persons living with AIDS by gender, exposure category and race/ethnicity, December 2006, San Francisco 11

Table 3.3 Persons living with HIV non-AIDS by gender, exposure category and race/ethnicity, December 2006, San Francisco 12

Table 3.4 Unmet need by demographic characteristics among persons living with HIV/AIDS, San Francisco, July 2004-June 2005 13

4. Survival among Persons with AIDS

Figure 4.1 Kaplan-Meier survival curves for persons diagnosed with AIDS in 1980-1989, 1990-1995, and 1996-2006, San Francisco 14

Figure 4.2 Kaplan-Meier survival curves for persons diagnosed with AIDS between 1996 and 2006 by race/ethnicity, San Francisco 15

Figure 4.3 Kaplan-Meier survival curves for persons diagnosed with AIDS between 1996 and 2006 by exposure category, San Francisco 16

Figure 4.4 Kaplan-Meier survival curves for persons diagnosed with AIDS between 1996 and 2006 by gender, San Francisco 17

Figure 4.5 Proportion surviving five years after AIDS for persons diagnosed with AIDS between 1996 and 2006 by race/ethnicity, exposure category, and gender, San Francisco 18

5. Trends in HIV/AIDS Mortality

Table 5.1 Deaths in persons with AIDS, by demographic and risk characteristics, San Francisco, 2003-2006 19

Figure 5.1 Death rates due to HIV/AIDS-related and non-HIV/AIDS-related causes among persons with AIDS, San Francisco, 1993-2004 20

Table 5.2 Underlying causes of death among persons with AIDS, San Francisco, 1993-2004 ...21

Table 5.3 Multiple causes of death among persons with AIDS, San Francisco, 1993-2004 22

Figure 5.2 Leading causes of death among San Francisco male residents aged 25-54 years, 1999 - 2003 23

Figure 5.3 Leading causes of death among San Francisco female residents aged 25-54 years, 1999-2003 24

Figure 5.4 Leading causes of death rates per 100,000 population among San Francisco male residents aged 25-54 years by race/ethnicity, 2003 25

Figure 5.5 Leading causes of death rates per 100,000 population among San Francisco male residents aged 15-64 years by age group, 2003 25

6. Use of Antiretroviral Therapy among Persons with AIDS

Figure 6.1 Lower level estimate of antiretroviral therapy use among persons living with AIDS by gender, race/ethnicity, and exposure category, San Francisco, December 2006 26

Figure 6.2 Upper level estimate of antiretroviral therapy use among persons living with AIDS by gender, race/ethnicity, and exposure category, San Francisco, December 2006 27

7. Insurance Status at Time of HIV/AIDS Diagnosis

Figure 7.1 Trends in insurance status among persons with AIDS by gender, San Francisco, 2001-2006 28

Figure 7.2 AIDS cases by gender and insurance status at diagnosis, San Francisco, 2001-2006 ...28

Figure 7.3 HIV non-AIDS cases by gender and insurance status at diagnosis, San Francisco, cases reported in 2002-2006 29

8. HIV/AIDS among Men Who Have Sex with Men

Figure 8.1 AIDS cases, deaths, and prevalence among MSM, San Francisco, 1997-2006 30

Figure 8.2 AIDS cases among MSM by race/ethnicity, San Francisco, 1997-2006 30

Figure 8.3 Percent of MSM reporting unprotected anal intercourse in the last six month by self-reported HIV status, the Stop AIDS Project, San Francisco, 1999-2006 31

Figure 8.4 Percent of MSM reporting unprotected anal intercourse in the last six months with at least one partner of unknown HIV status, the Stop AIDS Project, San Francisco, 1999-2006 31

Figure 8.5 Male rectal gonorrhea and male gonococcal proctitis among MSM, San Francisco, 1997-2006 32

Figure 8.6 Syphilis among MSM, San Francisco, 1997-2006 33

9. HIV/AIDS among Injection Drug Users

Figure 9.1 AIDS cases, deaths, and prevalence among non-MSM IDU, San Francisco, 1997 - 2006 34

Figure 9.2 AIDS cases among non-MSM IDU by race/ethnicity, San Francisco, 1997-2006 34

Table 9.1 Injection drug use-associated AIDS cases by exposure category and race/ethnicity, diagnosed through December 2006, San Francisco 35

10. HIV/AIDS among Heterosexuals

Figure 10.1 AIDS cases, deaths, and prevalence among heterosexuals, San Francisco, 1997-2006 .36

Figure 10.2 AIDS cases among heterosexuals by race/ethnicity, San Francisco, 1997-2006 36

Table 10.1 AIDS cases among heterosexuals by exposure category and gender, diagnosed through December 2006, San Francisco 37

Figure 10.3 HIV prevalence rate among blood donations and donors through 2006, San Francisco Bay Area 37

Figure 10.4 Syphilis among heterosexual men, San Francisco, 1997- 2006 38

Figure 10.5 Syphilis among women, San Francisco, 1997- 2006 38

11. HIV/AIDS among Women

Figure 11.1 AIDS cases, deaths, and prevalence among women, San Francisco, 1997-2006 39

Figure 11.2 Female AIDS cases by race/ethnicity, San Francisco, 1997-2006 39

Figure 11.3 Female AIDS cases diagnosed through December 2006 and female population by race/ethnicity, San Francisco 40

Figure 11.4 Female AIDS cases diagnosed through December 2006 by exposure category, San Francisco 40

12. HIV/AIDS among Adolescents and Young Adults

Table 12.1 Adolescent and young adult AIDS cases by exposure category, gender, and race/ethnicity, diagnosed through December 2006, San Francisco 41

13. HIV/AIDS among Children

Figure 13.1 Pediatric AIDS cases by year of diagnosis, San Francisco, 1980-2006 42

Table 13.1 Living pediatric HIV/AIDS cases by exposure category, gender, and race/ethnicity, San Francisco, December 2006 42

Table 13.2 Infants born to HIV-infected mothers by infant HIV status and race/ethnicity, San Francisco, December 2006 43

Figure 13.2 Infants born to HIV-infected mothers by year of birth and infant HIV status, San Francisco, 1994-2006 44

14. HIV/AIDS among Transgender Persons

Table 14.1 Characteristics of transgender HIV/AIDS cases compared to all HIV/AIDS cases, San Francisco 45

Figure 14.1 AIDS cases, deaths, and prevalence among transgender persons, San Francisco, 1997-2006 45

15. HIV/AIDS among Homeless Persons

Figure 15.1 Number and percent of homeless AIDS cases by year of diagnosis, San Francisco, 1997-2006 46

Table 15.1 Characteristics of homeless HIV/AIDS cases compared to all HIV/AIDS cases, San Francisco 46

16. Sexually Transmitted Diseases among Persons with AIDS

Figure 16.1 Number of AIDS cases diagnosed with an STD by year of STD diagnosis, San Francisco, 1996-2005 47

17. Late HIV Testing

Table 17.1 Characteristics of late HIV testers, AIDS cases diagnosed between 2002 and 2006, San Francisco 48

Table 17.2 Level of the first CD4 count within 12 months after HIV diagnosis, HIV/AIDS cases diagnosed in 2002-2006, San Francisco 49

18. Geographic Distribution of HIV/AIDS

Map 18.1 Distribution of persons living with HIV/AIDS, San Francisco, December 2006 50

Dear Colleague,

We want to call your attention to a change implemented in 2005 in how we present the San Francisco HIV/AIDS surveillance data. Beginning in 2005, publications of our data were changed to include only persons who were residents of San Francisco at the time they were diagnosed with HIV/AIDS. Prior to this change, our reports also included persons who were diagnosed with HIV/AIDS at a San Francisco medical facility, but who were residents elsewhere at the time of their diagnosis.

We decided to exclude non-San Francisco residents from the data presentations because HIV/AIDS case reporting practices result in our having a highly complete count of San Francisco residents with HIV/AIDS, but an incomplete record of non-San Francisco residents with HIV/AIDS. In order to provide consistent HIV/AIDS surveillance data, our surveillance quarterly and annual reports now include only reports of persons diagnosed with HIV or AIDS who were residents of San Francisco at the time of their diagnosis. Consequently, the numbers in reports from 2005 and later will differ from reports published prior to 2005.

You may contact the HIV Epidemiology Section of the San Francisco Department of Public Health at (415) 554-9050 if you have questions concerning our reports.

Thank you for your interest,

The HIV Epidemiology Section Staff

Executive Summary

We are pleased to present in this publication expanded information about the number of people diagnosed with HIV but who have not developed AIDS in San Francisco. Several changes have occurred in the past year that affect our reporting practices and enable us to gather more complete HIV case information.

In 2002, California implemented a code-based HIV case reporting system. Under the code-based system, persons with HIV were reported using a code rather than their name. Several factors led to the recent decision to replace the code-based reporting system with a name-based system (in which each person with HIV is reported using their name). These factors included concerns about the possible over-counting of HIV cases with a code-based system as well as difficulties in evaluating the completeness and accuracy of a code-based HIV system. In addition, the way that the Ryan White Comprehensive AIDS Resources and Emergency (CARE) Act allocates funds to areas for medical and social services for HIV-infected persons has changed. In the past, CARE funds were allocated, in part, on the number of living AIDS cases in a specified area. Now, CARE funds are allocated based upon living HIV cases (i.e., those with and without full-blown AIDS). Code-based HIV case reports can not be counted towards CARE funds because of concerns about the quality of the data.

In order to ensure that HIV case reporting is complete and represents an accurate count of persons diagnosed with HIV and to allow for the continued receipt of CARE funds, the State of California, with the support of organizations representing the HIV/AIDS care, treatment, prevention and advocacy communities, passed a bill (SB 699) requiring the implementation of name-based HIV reporting on April 17, 2006. This law took effect immediately. Since that time, the San Francisco HIV Epidemiology Section has been working hard to implement this change and to ensure a smooth and efficient transition to name-based HIV reporting.

Our goal has been to move as quickly as possible to report all HIV cases by name, including those cases that were previously reported using the code-based system. To date, over 55% of the code-based HIV cases identified before April 17, 2006 have been re-reported by name, the highest of any county in California. This proportion in San Francisco compares to 30% overall in the State. The data presented in this report include both name-based and code-based cases. However, because HIV case reporting is not yet complete and does not cover all the infected population (e.g., those infected but not aware of their infection), the data need to be interpreted with caution.

Our role as the HIV Epidemiology Section is to monitor the HIV/AIDS epidemic and to disseminate the information that we collect in a meaningful way. We believe that the move to HIV reporting by name will improve the quality, completeness and timeliness of the information we collect. Collecting reports of persons with AIDS and HIV provides more comprehensive data with which to monitor the HIV/AIDS epidemic in San Francisco. As such, we believe that name-based HIV and AIDS case reporting will permit better data analysis which will be helpful in planning for the needs of groups most severely affected by the HIV/AIDS epidemic.

1 Overview of HIV/AIDS in San Francisco

HIV/AIDS surveillance in San Francisco is conducted through various methods and evaluated regularly (see Technical Notes, HIV/AIDS Surveillance Methods). As of December 31, 2006, a cumulative total of 27,027 San Francisco residents were diagnosed with AIDS (Table 1.1). This comprises 19% of California AIDS cases and three percent of cases reported nationally. As of December 2005, San Francisco was ranked third in the cumulative number of AIDS cases and ranked fifth in the AIDS incidence rate in 2005 among metropolitan areas nationwide. Compared to California and the United States as a whole, AIDS cases in San Francisco are more likely to be male, white, and to occur among men who have sex with men (MSM), including MSM who also inject drugs (MSM IDU).

Table 1.1 Characteristics of cumulative AIDS cases in San Francisco, California, and the United States#

	San Francisco (N = 27,027)		California (N = 143,043)	United States (N = 956,019)
	Number	%	%	%
Gender				
Male	25,574	95%	91%	81%
Female	1,093	4%	8%	19%
Transgender*	360	1%	<1%	--
Race/Ethnicity				
White	19,454	72%	56%	40%
African American	3,429	13%	18%	40%
Latino	3,126	12%	23%	19%
Asian/Pacific Islander	838	3%	2%	<1%
Native American	140	<1%	<1%	<1%
Other/Unknown	40	<1%	<1%	<1%
Exposure Category				
MSM	20,170	75%	68%	44%
IDU	2,060	8%	10%	24%
MSM IDU	3,997	15%	9%	7%
Heterosexual	370	1%	6%	13%
Other/Unidentified	430	1%	7%	12%

San Francisco data are reported through March 13, 2007 for cases diagnosed through December 2006; California data are reported through December 2006; U.S. data are reported through December 2005.

* Transgender data are not reported by the United States. See Technical Notes "Transgender Status."

In San Francisco, MSM account for the majority of male AIDS cases within all race/ethnic groups (Table 1.2). Among African American men, heterosexual injection drug use is the second most frequent exposure category. Among men of all other race/ethnic groups, MSM IDU represents the second most frequent exposure category and is a particularly prominent exposure category among Native American men. Two percent or less of men with AIDS acquired HIV infection through heterosexual contact.

Among women with AIDS, injection drug use (IDU) is the most frequent exposure category for white, African American, Latina, and Native American women, followed by heterosexual contact. For Asian/Pacific Islander women, 38% acquired their infection through heterosexual contact, 35% through injection drug use, and 17% through transfusion of blood or blood products.

Injection drug use is prevalent among male to female transgender AIDS cases. Among transgender AIDS cases, 59% of whites, 69% of African Americans, and 47% of Latinos were IDU.

Table 1.2 Cumulative AIDS cases by gender, exposure category, and race/ethnicity, diagnosed through December 2006, San Francisco

	White		African American		Latino		Asian/Pacific Islander		Native American	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Male										
MSM	15,606	(82)	1,465	(52)	2,237	(78)	625	(84)	63	(51)
IDU	489	(3)	665	(24)	164	(6)	22	(3)	10	(8)
MSM IDU	2,762	(15)	566	(20)	364	(13)	53	(7)	45	(37)
Heterosexual	30	(<1)	40	(1)	23	(1)	7	(1)	2	(2)
Transfusion/ Hemophilia	51	(<1)	17	(1)	22	(1)	14	(2)	0	(0)
Other/Unidentified	53	(<1)	54	(2)	63	(2)	26	(3)	3	(2)
Male Subtotal	**18,991**		**2,807**		**2,873**		**747**		**123**	
Female										
IDU	234	(65)	363	(72)	70	(48)	22	(35)	11	(85)
Heterosexual	80	(22)	104	(21)	55	(37)	24	(38)	2	(15)
Transfusion/ Hemophilia	29	(8)	13	(3)	10	(7)	11	(17)	0	(0)
Other/Unidentified	16	(4)	26	(5)	12	(8)	6	(10)	0	(0)
Female Subtotal	**359**		**506**		**147**		**63**		**13**	
Transgender* (Male to Female Only)										
IDU	61	(59)	79	(69)	49	(47)	#		#	
Non IDU	42	(41)	36	(31)	56	(53)	#		#	
Transgender Subtotal	**103**		**115**		**105**		**#**		**#**	

* See Technical Notes "Transgender Status."

\# Data not released due to potential small population size.

The number of new AIDS cases diagnosed among San Francisco residents peaked in 1992 at 2,327 (Figure 1.1). There was a slight increase in the number of new AIDS cases between 2002 and 2003, followed by a decrease in cases in subsequent years. Delays in reporting affect the number of cases for recent years; therefore, the numbers of cases for 2005 and 2006 may be revised upward in future reports. Deaths among persons with AIDS reached a plateau between 1992 and 1995, and declined thereafter. The sharpest decline in AIDS deaths occurred between 1995 and 1997, reflecting the impact of effective combination antiretroviral therapies. By the end of 2006, there were 8,795 San Francisco residents living with AIDS. Of note, mortality data for 2005 and 2006 are not yet complete.

Figure 1.1 AIDS cases, deaths, and prevalence, San Francisco, 1980-2006

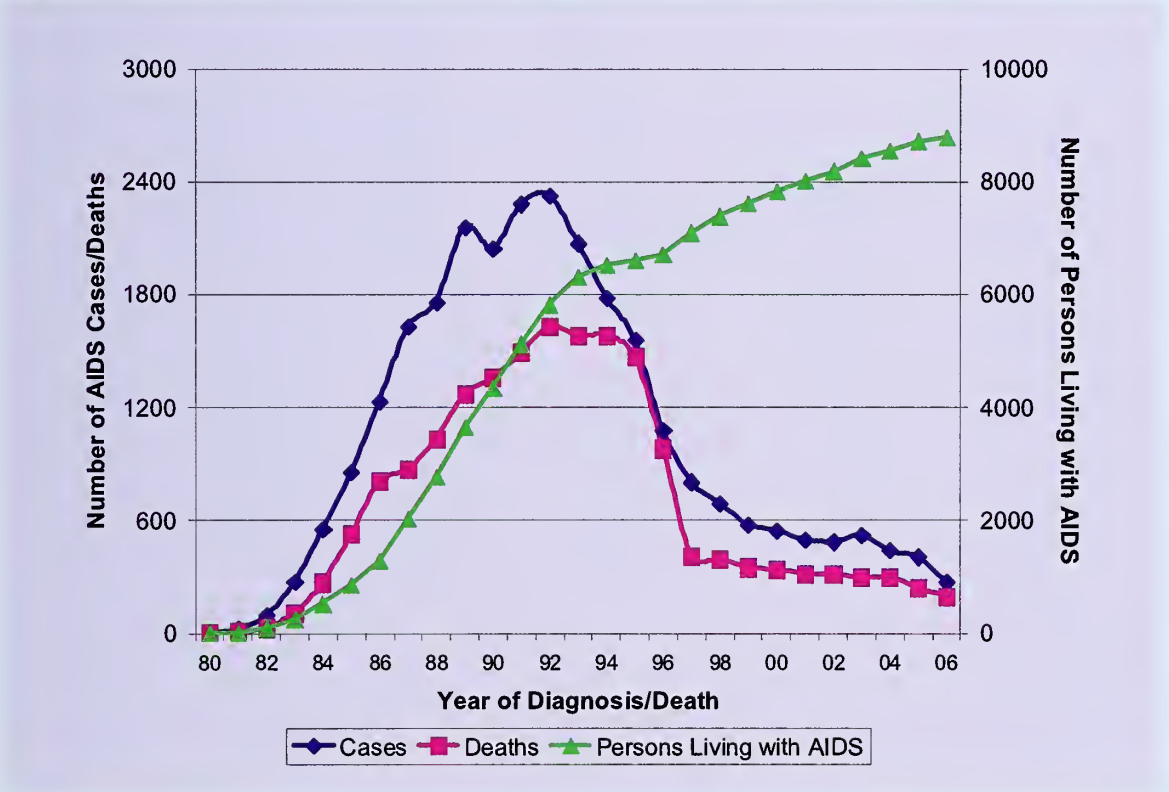


Table 1.3 shows the number and characteristics of cases whose initial HIV diagnosis occurred between 2002 and 2006. Initial date of HIV diagnosis was determined based on the earliest date of HIV antibody test, viral load or CD4 test, antiretroviral treatment start date, or patient self report of a positive HIV test. The number includes both code-based and name-based HIV cases reported to the San Francisco Department of Public Health, and does not include HIV-infected persons who are not aware of their infection or cases not yet reported. In addition, the data include persons who were initially diagnosed with HIV and had a later diagnosis of AIDS and those diagnosed with HIV and AIDS at the same time.

The number of persons newly diagnosed with HIV declined between 2004 and 2006. However the large decrease in recent years may be attributed to delays in reporting of persons recently diagnosed with HIV. Overall, the characteristics of persons newly diagnosed with HIV remained relatively stable with the majority of cases being male, white, and MSM.

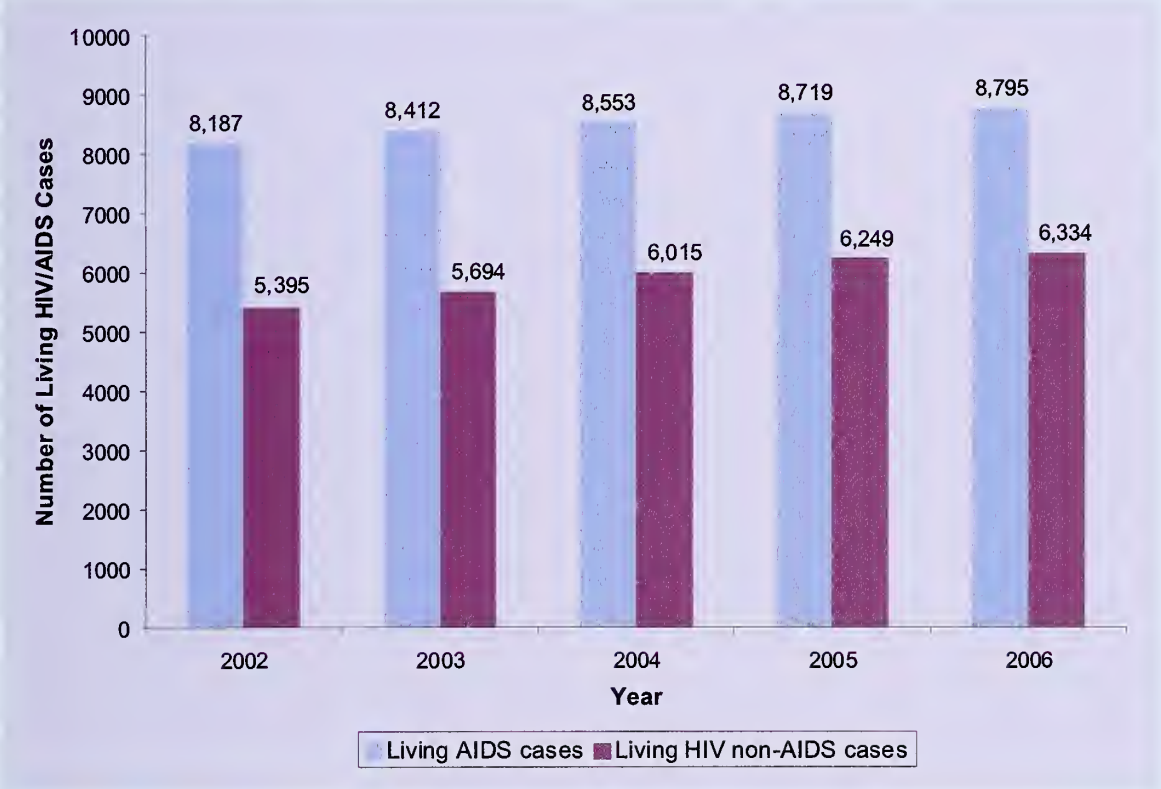
Table 1.3 Characteristics of persons newly diagnosed with HIV between 2002 and 2006, San Francisco

	Year of Initial HIV Diagnosis				
	2002	2003	2004	2005	2006
Total number*	832	843	788	669	406
Gender					
Male	88%	89%	91%	89%	91%
Female	8%	8%	7%	9%	8%
Transgender	4%	3%	2%	2%	1%
Race/Ethnicity					
White	55%	51%	55%	50%	57%
African American	18%	19%	14%	17%	14%
Latino	16%	18%	18%	20%	20%
Asian/Pacific Islander	6%	6%	8%	6%	7%
Native American	1%	1%	1%	1%	1%
Other/Unknown	4%	5%	4%	6%	1%
Exposure Category					
MSM	66%	62%	71%	65%	70%
IDU	10%	12%	9%	8%	8%
MSM IDU	12%	12%	9%	10%	7%
Heterosexual	3%	3%	3%	5%	5%
Other/Unidentified	9%	11%	8%	12%	10%

* Includes persons with a diagnosis of HIV (non-AIDS), an initial diagnosis of HIV (non-AIDS) and a later diagnosis of AIDS, or concurrent diagnosis of HIV and AIDS.

The number of persons living with HIV non-AIDS who were reported to the San Francisco Department of Public Health increased from 5,395 in 2002 to 6,334 in 2006 (Figure 1.2). The number includes both code-based and name-based HIV cases. The "2006 HIV Consensus Estimates" projected 18,735 persons living with HIV/AIDS in San Francisco on January 1, 2006 (see 2005 Annual Report). About half are persons with AIDS and the other half are persons with HIV non-AIDS. The gap between the consensus estimate and the case reporting data indicate that a good proportion of persons with HIV are not aware of their infection or not in care. In addition, reporting of HIV cases is incomplete including those diagnosed in earlier years and surveillance data only includes persons diagnosed with HIV/AIDS who are residents of San Francisco. Persons who are residents of other jurisdictions and receive care in San Francisco are not included in the case counts.

Figure 1.2 HIV/AIDS prevalence, San Francisco, 2002-2006

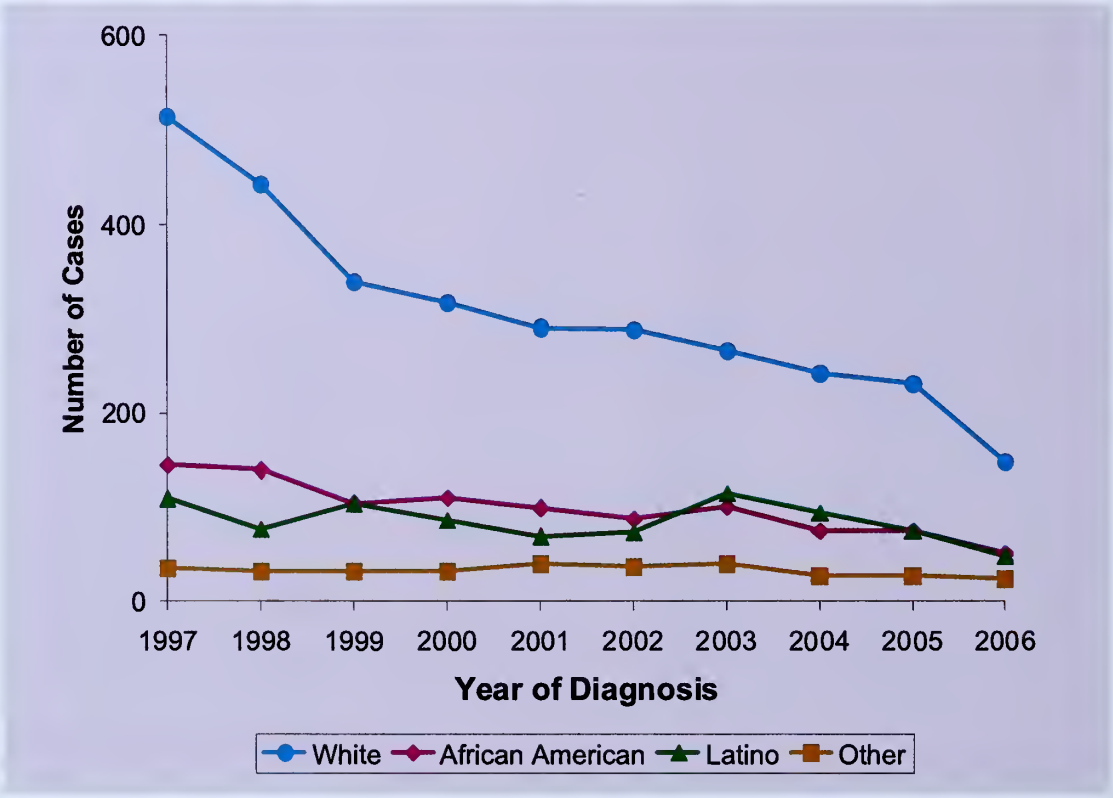


2 Trends in AIDS Incidence

Race/ethnicity

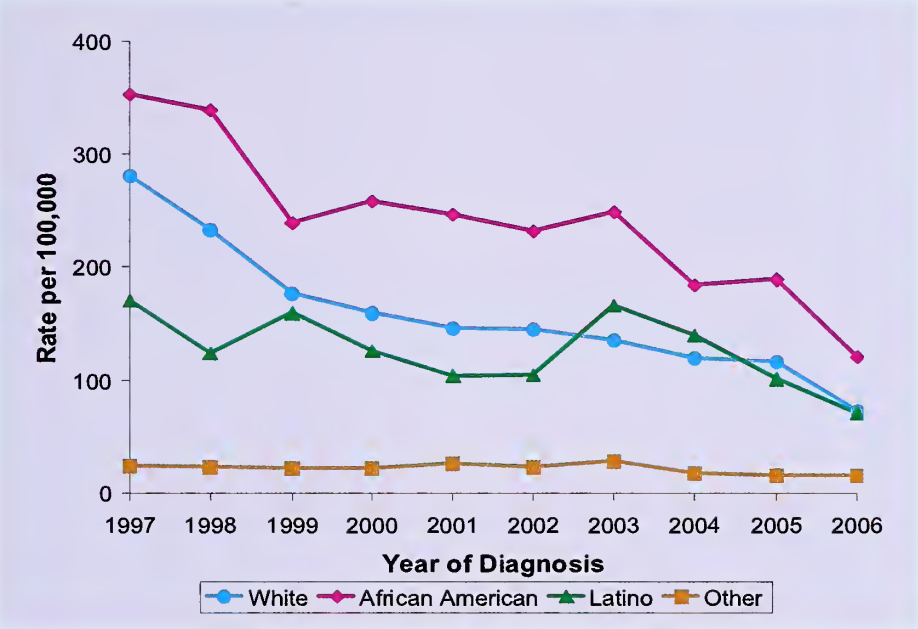
In absolute numbers, AIDS cases in San Francisco have occurred predominantly among whites (Figure 2.1). The number of white AIDS cases has declined over the last 10 years. The trend for African American and Latino AIDS cases show periods of slight increase until 2003 and decline thereafter. Delays in reporting affect the numbers of cases for recent years, particularly for 2005 and 2006.

Figure 2.1 Number of AIDS cases by race/ethnicity, San Francisco, 1997-2006



Since 1997, the incidence rates of AIDS among African American men have consistently been higher than for men of all other race/ethnic groups on a per population basis (Figure 2.2). The incidence rate for Latino men exceeded that of white men in 2003 and 2004. In 2006, the incidence rate of AIDS per 100,000 population was 121 among African American men, 74 for white men, and 72 for Latino men. Delays in reporting result in under-estimation for recent years, particularly 2005 and 2006.

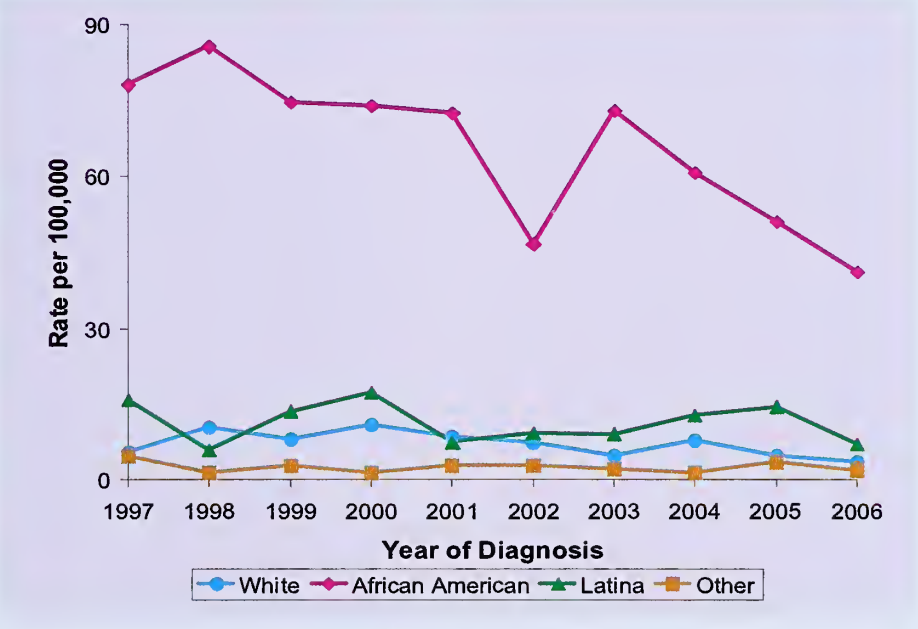
Figure 2.2 Male annual AIDS incidence rates* per 100,000 population by race/ethnicity, San Francisco, 1997-2006



* See Technical Notes "AIDS Incidence Rates."

The incidence rate of AIDS among women is considerably lower than that among men. African American women have been disproportionately impacted by AIDS throughout the epidemic compared to women of other race/ethnic groups. However in recent years, the AIDS incidence rate for African American women has continued to decline (Figure 2.3). The incidence rate among African American women was 41 per 100,000 in 2006. Although incidence rates for Latinas are low, there has generally been an increase from 2001 through 2005.

Figure 2.3 Female annual AIDS incidence rates* per 100,000 population by race/ethnicity, San Francisco, 1997-2006

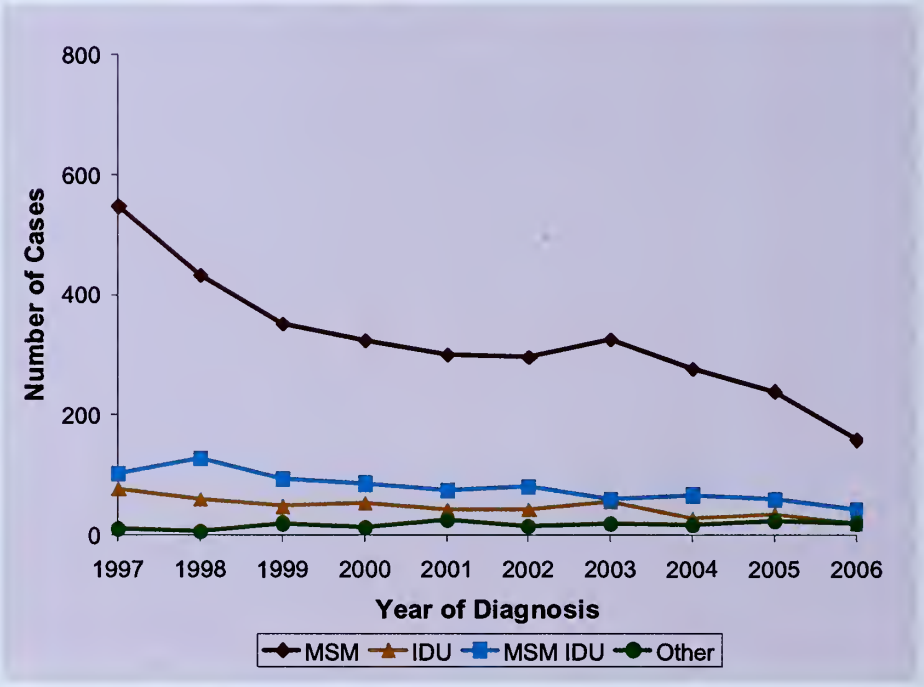


* See Technical Notes "AIDS Incidence Rates."

Exposure category

The majority of male AIDS cases have occurred among MSM (Figure 2.4). The number of cases among MSM has decreased between 1997 and 2006. In 2006, 66% of male AIDS cases were MSM, 18% were MSM IDU, and 8% were heterosexual IDU.

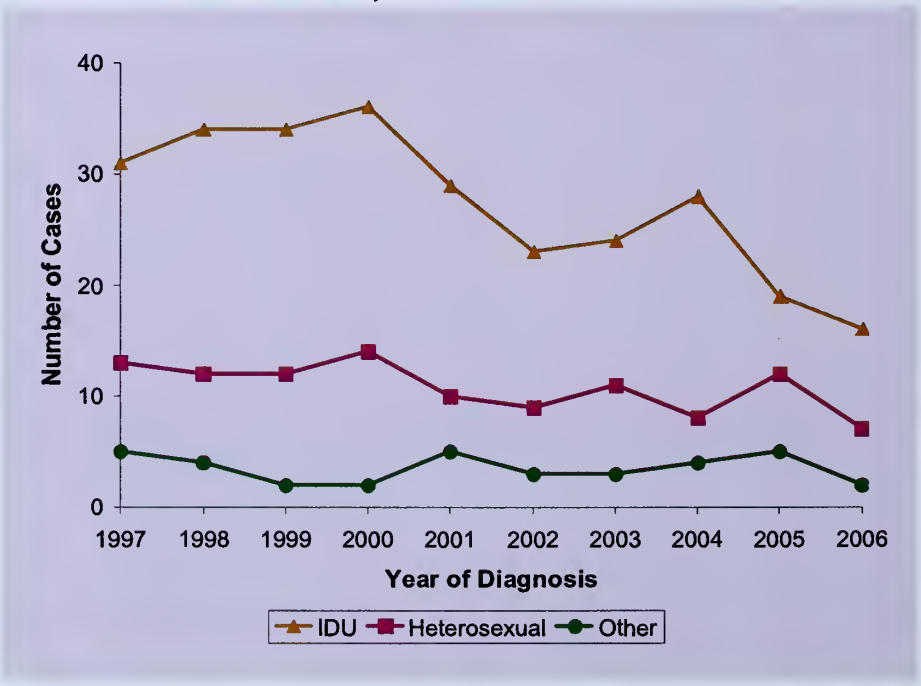
Figure 2.4 Number of male AIDS cases* by exposure category, San Francisco, 1997-2006



* Excludes male-to-female transgender AIDS cases.

The predominant exposure category of AIDS cases among women is injection drug use, followed by heterosexual transmission (Figure 2.5).

Figure 2.5 Number of female AIDS cases* by exposure category, San Francisco, 1997-2006



* Excludes female-to-male transgender AIDS cases.

Age

The largest number of men, women and transgender persons with AIDS were diagnosed between ages 30 and 39 years (Table 2.1). Younger persons (under the age of 30) made up a larger proportion of female and transgender AIDS cases than male AIDS cases. Comparing cases diagnosed in 2003-2006 to those diagnosed in earlier periods, there was an increase in the percentage of women diagnosed with AIDS in the over 50 years age group, as well as the percentage of men in the over 40 years age group. This may reflect the use of more effective drug therapies which extended the time from acquiring HIV infection to the development of AIDS.

Table 2.1 AIDS cases by gender and age at diagnosis, diagnosed 1996-2006, San Francisco

	1996-1998		1999-2002		2003-2006		Cumulative Totals	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Male (Age in years)								
0 - 19	3	(<1)	3	(<1)	4	(<1)	45	(<1)
20 - 29	238	(10)	145	(8)	117	(8)	2,862	(11)
30 - 39	994	(43)	788	(42)	494	(34)	11,591	(45)
40 - 49	780	(33)	636	(34)	530	(37)	8,051	(31)
50+	317	(14)	294	(16)	303	(21)	3,025	(12)
Male Subtotal	**2,332**	**(100)**	**1,866**	**(100)**	**1,448**	**(100)**	**25,574**	**(100)**
Female (Age in years)								
0 - 19	2	(1)	4	(2)	1	(1)	24	(2)
20 - 29	22	(13)	23	(13)	19	(14)	156	(14)
30 - 39	72	(41)	62	(35)	44	(32)	429	(39)
40 - 49	62	(35)	60	(34)	47	(34)	325	(30)
50+	17	(10)	30	(17)	28	(20)	159	(15)
Female Subtotal	**175**	**(100)**	**179**	**(100)**	**139**	**(100)**	**1,093**	**(100)**
Transgender (Age in years)								
13 - 29	16	(22)	11	(15)	7	(12)	86	(24)
30 - 39	31	(42)	32	(44)	27	(47)	164	(46)
40+	26	(36)	29	(40)	24	(41)	110	(31)
Transgender Subtotal	**73**	**(100)**	**72**	**(100)**	**58**	**(100)**	**360**	**(100)**

3 Persons Living with HIV/AIDS

HIV/AIDS surveillance data

Ongoing incidence of HIV, coupled with the increase in survival after AIDS, has resulted in an increasing number of persons living with HIV/AIDS. Persons were counted as living in a year if their HIV diagnosis date was in or before that year and they were known to be alive at the end of the year. As of December 31, 2006, there were 15,129 San Francisco residents recorded as living with HIV/AIDS (Table 3.1). The demographic and risk characteristics of persons living with HIV/AIDS have remained relatively stable between 2002 and 2006; most are white, age 40-49 years, and MSM (including MSM IDU). The proportion of persons living with HIV/AIDS in the 50+ years age group increased between 2002 and 2006. This may reflect that use of antiretroviral treatments is allowing persons with HIV/AIDS to live longer.

Table 3.1 Trends in persons living with HIV/AIDS by demographic and risk characteristics, San Francisco, 2002-2006#

	2002		2003		2004		2005		2006	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Gender										
Male	12,493	(92)	12,961	(92)	13,390	(92)	13,754	(92)	13,919	(92)
Female	796	(6)	836	(6)	865	(6)	898	(6)	898	(6)
Transgender	293	(2)	309	(2)	313	(2)	316	(2)	312	(2)
Race/Ethnicity										
White	9,015	(66)	9,244	(66)	9,483	(65)	9,669	(65)	9,742	(64)
African American	1,974	(15)	2,060	(15)	2,096	(14)	2,135	(14)	2,146	(14)
Latino	1,830	(13)	1,949	(14)	2,056	(14)	2,163	(14)	2,217	(15)
Asian/Pacific Islander	541	(4)	591	(4)	644	(4)	673	(4)	691	(5)
Native American	85	(1)	92	(1)	99	(1)	104	(1)	106	(1)
Other/Unknown	137	(1)	170	(1)	190	(1)	224	(1)	227	(2)
Age in years (at end of each year)										
0 - 19	41	(<1)	45	(<1)	43	(<1)	35	(<1)	29	(<1)
20 - 29	559	(4)	571	(4)	617	(4)	627	(4)	582	(4)
30 - 39	3,955	(29)	3,757	(27)	3,482	(24)	3,202	(21)	2,924	(19)
40 - 49	5,588	(41)	5,843	(41)	6,064	(42)	6,264	(42)	6,276	(41)
50+	3,439	(25)	3,890	(28)	4,362	(30)	4,840	(32)	5,318	(35)
Risk										
MSM	9,755	(72)	10,104	(72)	10,499	(72)	10,802	(72)	10,949	(72)
IDU	1,250	(9)	1,285	(9)	1,288	(9)	1,283	(9)	1,271	(8)
MSM IDU	1,878	(13)	1,902	(13)	1,892	(13)	1,894	(13)	1,871	(12)
Heterosexual	281	(2)	301	(2)	320	(2)	351	(2)	366	(2)
Transfusion/Hemophilia	36	(<1)	38	(<1)	37	(<1)	37	(<1)	37	(<1)
Other/Unidentified	382	(3)	476	(3)	532	(4)	601	(4)	635	(4)
Total	**13,582**		**14,106**		**14,568**		**14,968**		**15,129**	

Persons living with HIV/AIDS at the end of each year.

As of December 31, 2006, there were a total of 8,795 persons living with AIDS in San Francisco (Table 3.2). Of these, 92% were male, 6% were female, and 2% were transgender. Sixty-eight percent of the living male AIDS cases were white. Men who have sex with men account for the majority of living male AIDS cases within all race/ethnic groups. Among women living with AIDS, African American women comprise the largest race/ethnic group (45%), followed by white women (31%). The two most frequent exposure categories for living female AIDS cases are injection drug use and heterosexual contact.

Table 3.2 Persons living with AIDS by gender, exposure category and race/ethnicity, December 2006, San Francisco

	White		African American		Latino		Asian/Pacific Islander & Native American		Total*
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number
Male									
MSM	4,524	(82)	478	(51)	962	(79)	306	(79)	6,282
IDU	183	(3)	226	(24)	54	(4)	17	(4)	481
MSM IDU	780	(14)	189	(20)	142	(12)	40	(10)	1,158
Heterosexual	13	(<1)	21	(2)	19	(2)	4	(1)	58
Other	5	(<1)	5	(<1)	4	(<1)	6	(2)	21
No Reported Risk	26	(<1)	27	(3)	30	(2)	16	(4)	100
Male Subtotal	**5,531**		**946**		**1,211**		**389**		**8,100**
Female									
IDU	104	(68)	157	(70)	33	(41)	12	(30)	308
Heterosexual	39	(25)	53	(24)	36	(44)	19	(48)	147
Other	5	(3)	4	(2)	6	(7)	4	(10)	19
No Reported Risk	6	(4)	10	(4)	6	(7)	5	(12)	28
Female Subtotal	**154**		**224**		**81**		**40**		**502**
Transgender	**50**		**62**		**59**		**21**		**193**
Total	**5,735**		**1,232**		**1,351**		**450**		**8,795**

* Includes persons with multiple race or whose race/ethnicity information is not available.

As of December 31, 2006, a total of 6,334 HIV non-AIDS cases living in San Francisco were reported (Table 3.3). Of these, 92% were male, 6% were female, and 2% were transgender. As in living AIDS cases, the majority of living male HIV non-AIDS cases were white and MSM; the majority of living female HIV non-AIDS cases were African American and injection drug user.

Demographic and risk characteristics of living HIV non-AIDS cases are similar to those for living AIDS cases. However, larger proportions of living HIV non-AIDS cases are reported without risk information. This is due, in part, to the non-name code-based HIV reporting system used to report HIV non-AIDS cases up until April 17, 2006, which resulted in the inability to follow up and obtain complete case information. It is expected that the risk information will be more complete with the name-based reporting of HIV cases.

Table 3.3 Persons living with HIV non-AIDS by gender, exposure category and race/ethnicity, December 2006, San Francisco

	White		African American		Latino		Asian/Pacific Islander & Native American		Total*
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number
Male									
MSM	3,187	(82)	362	(53)	654	(82)	242	(83)	4,517
IDU	140	(4)	118	(17)	24	(3)	13	(4)	296
MSM IDU	381	(10)	96	(14)	53	(7)	20	(7)	561
Heterosexual	9	(<1)	22	(3)	12	(2)	2	(<1)	47
Other	6	(<1)	2	(<1)	4	(<1)	0	(0)	12
No Reported Risk	155	(4)	83	(12)	46	(6)	16	(5)	386
Male Subtotal	**3,878**		**683**		**793**		**293**		**5,819**
Female									
IDU	62	(54)	81	(46)	17	(33)	16	(43)	181
Heterosexual	23	(20)	52	(29)	17	(33)	16	(43)	111
Other	3	(3)	4	(3)	2	(4)	1	(3)	11
No Reported Risk	27	(23)	40	(23)	15	(29)	4	(11)	93
Female Subtotal	**115**		**177**		**51**		**37**		**396**
Transgender	**23**		**54**		**22**		**17**		**119**
Total	**4,016**		**914**		**866**		**347**		**6,334**

* Includes persons with multiple race or whose race/ethnicity information is not available.

Estimate of unmet need for HIV medical care

An analysis was conducted to estimate unmet need for primary medical care for persons diagnosed with HIV/AIDS or residing in San Francisco. Persons with HIV/AIDS were considered to have a met need for care if they had received antiretroviral therapy or had at least one CD4 or viral load test during the 12-month period from July 1, 2004 through June 30, 2005. Care information was obtained from laboratory reporting of viral load and CD4 test results, medical record reviews, and data from Medi-Cal, AIDS Drug Assistance Program (ADAP) and Kaiser Permanente Northern California. The total number of persons living with AIDS (PLWA), the total number of persons living with HIV non-AIDS (PLWH), the proportion of PLWA who did not receive care from a sample of chart reviews, and the number of PLWH who did not receive care were determined using all available data sources. The unmet need estimates were for persons who have been diagnosed with HIV/AIDS and do not include undiagnosed cases or those infected individuals who are not aware of their infection.

We estimated that there were 9,916 PLWA and 8,665 PLWH in San Francisco during July 2004 and June 2005. These included San Francisco residents with HIV/AIDS and non-San Francisco residents diagnosed with HIV/AIDS in San Francisco. A total of 883 PLWA (9%) and 2,546 PLWH (29%) did not receive primary medical care during that time period (Table 3.4). Among PLWA, unmet need was similar across all categories examined. Among PLWH, persons 20 to 29 years of age were identified to have the greatest unmet need for medical care (44%).

Table 3.4 Unmet need by demographic characteristics among persons living with HIV/AIDS*, San Francisco, July 2004-June 2005

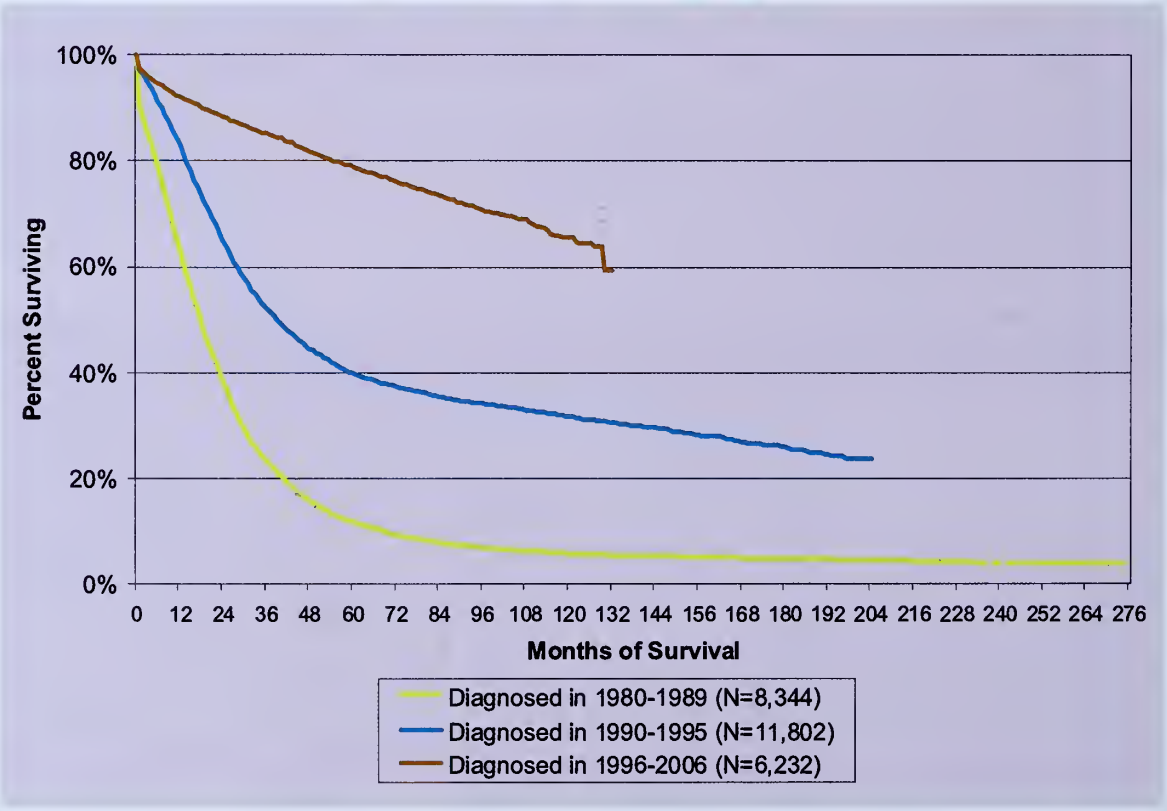
	Persons with AIDS N=9,916		Persons with HIV/non-AIDS N=8,665		All HIV/AIDS N=18,581	
	with unmet need		with unmet need		with unmet need	
	Number	%	Number	%	Number	%
Total	883	9%	2,546	29%	3,429	18%
Gender						
Male	841	9%	2,350	30%	3,191	19%
Female	42	7%	196	26%	238	18%
Race/Ethnicity*						
White	623	10%	1,572	29%	2,195	19%
African American	101	7%	430	31%	531	19%
Latino	116	8%	374	31%	490	19%
Asian/Pacific Islander	30	7%	129	28%	159	18%
Other	13	14%	41	16%	54	16%
Age in years (as of 6/30/05)						
0-19	2	9%	25	36%	27	29%
20-29	18	11%	294	44%	312	38%
30-39	190	11%	827	33%	1,017	24%
40-49	396	9%	918	27%	1,314	17%
50-59	201	7%	391	25%	592	13%
60+	76	9%	91	19%	167	13%

* Includes both San Francisco residents and nonresidents who were diagnosed with HIV/AIDS in San Francisco.

4 Survival among Persons with AIDS

The Kaplan-Meier curve presented below demonstrates that survival improved for San Francisco residents diagnosed with AIDS between 1996 and 2006, compared with persons diagnosed in earlier time periods. Survival was poor for persons diagnosed in the first ten years of the AIDS epidemic (1980-1989) with 50% of cases surviving 18 months (median survival time) after AIDS diagnosis. Survival improved for persons diagnosed between 1990 and 1995, when the median survival time was over three years (39 months). Approximately 60% of persons diagnosed with AIDS between 1996 and 2006 are still living. Improvements in survival among persons diagnosed with AIDS after 1995 are attributable to more effective antiretroviral therapies.

Figure 4.1 Kaplan-Meier survival* curves for persons diagnosed with AIDS in 1980-1989, 1990-1995, and 1996-2006, San Francisco

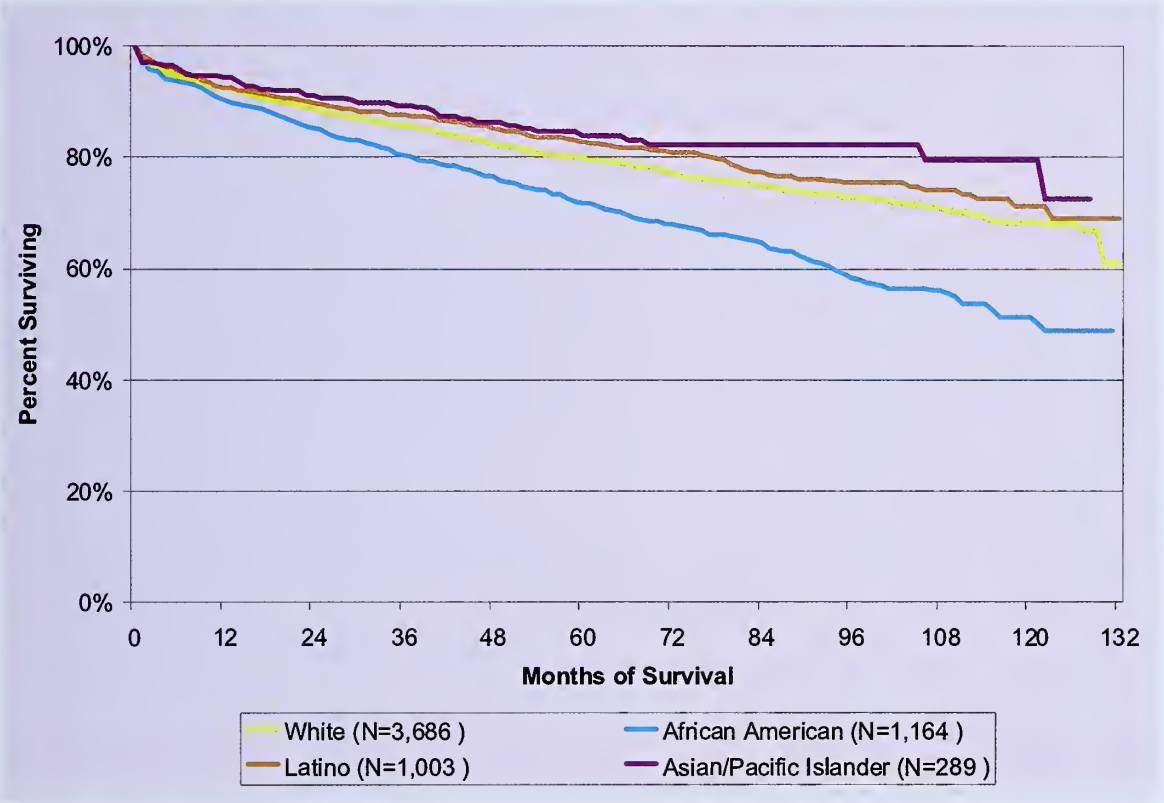


* See Technical Notes "AIDS Survival."

Survival after AIDS diagnosis is worse for African Americans than other racial/ethnic groups (Figure 4.2). Among persons diagnosed between 1996 and 2006, the percent of African Americans surviving 36 months (three years) after AIDS was 80%, compared to 86% of whites, 88% of Latinos, and 89% of Asians/Pacific Islanders. The percent surviving 60 months (five years) after AIDS was 72% for African Americans, 80% for whites, 83% for Latinos, and 84% for Asians. The percent surviving 84 months (seven years) after AIDS was 65% for African Americans, 75% for whites, 77% for Latinos, and 82% for Asians.

Although these survival differences are due in part to lower proportions of African American AIDS cases on highly active antiretroviral therapies, other reasons for these differences are not entirely understood.

Figure 4.2 Kaplan-Meier survival* curves for persons diagnosed with AIDS between 1996 and 2006 by race/ethnicity, San Francisco

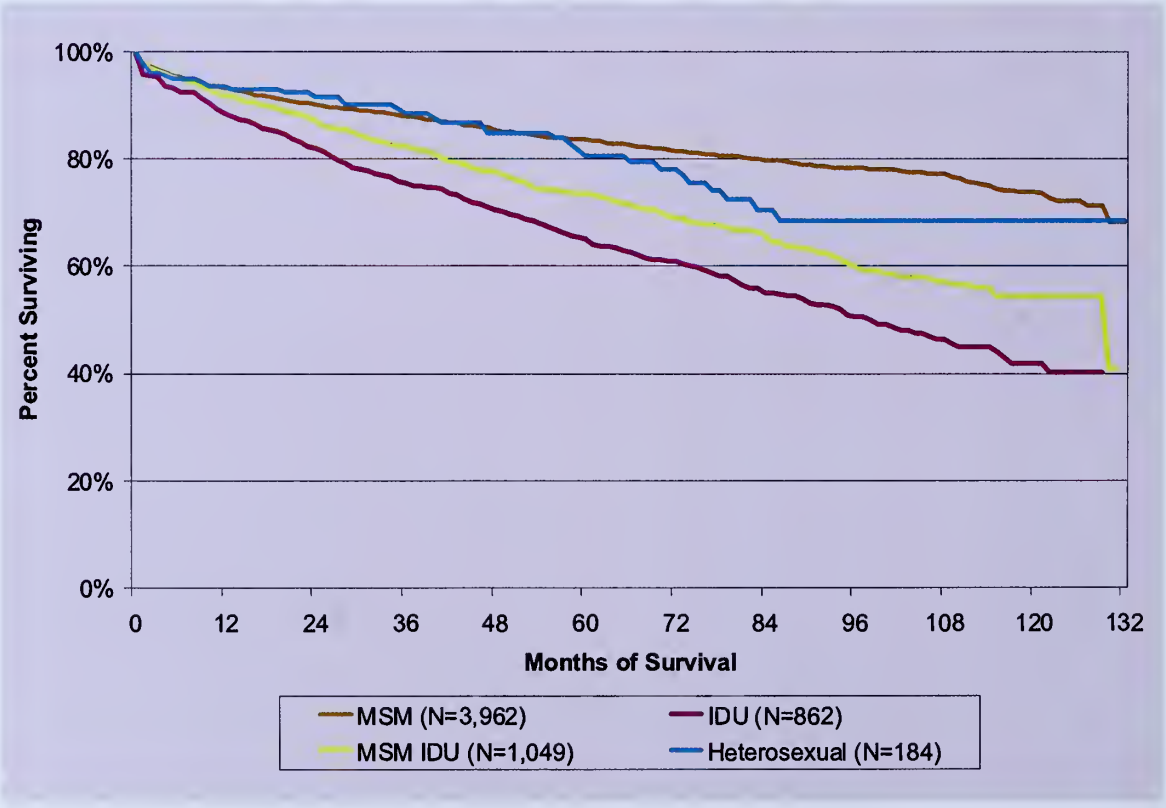


* See Technical Notes "AIDS Survival."

Survival after AIDS diagnosis has been better for MSM and heterosexuals compared to MSM IDU and heterosexual IDU (Figure 4.3). Eighty-eight percent of MSM and 89% of heterosexuals diagnosed in 1996-2006 survived 36 months (three years) after their AIDS diagnosis, compared to 82% of MSM IDU and 76% of other IDU. The 5-year (60 months) survival was 84% for MSM, 81% for heterosexuals, 73% for MSM IDU, and 65% for heterosexual IDU. The 7-year (84 months) survival was 80% for MSM, 71% for heterosexuals, 66% for MSM IDU, and 55% for heterosexual IDU.

Worse survival among IDU partly reflects higher death rates from causes associated with drug use such as overdose, liver disease, and other infections.

Figure 4.3 Kaplan-Meier survival* curves for persons diagnosed with AIDS between 1996 and 2006 by exposure category, San Francisco

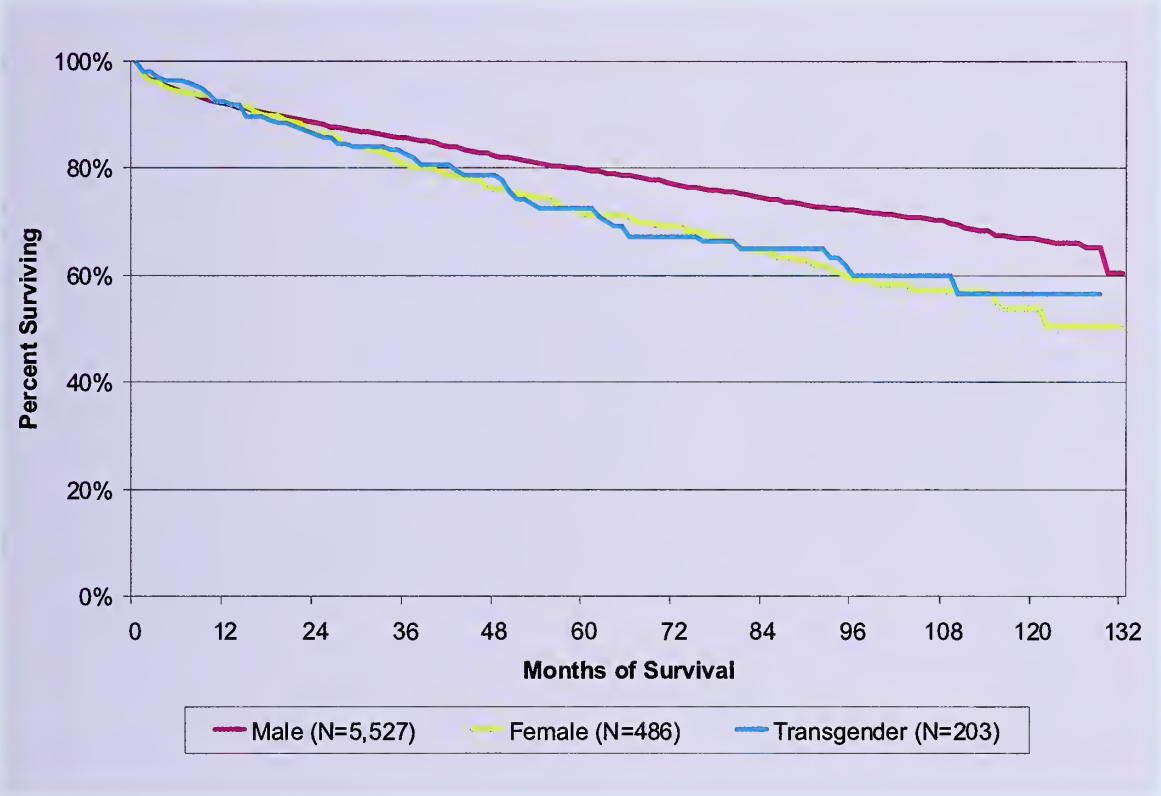


* See Technical Notes "AIDS Survival."

Eighty-six percent of men, 81% of women, and 83% of transgenders survived 36 months (three years) after AIDS diagnosis (Figure 4.4). The 5-year (60 months) survival was 80% for men, 71% for women, and 73% for transgenders. The 7-year (84 months) survival was 75% for men, 64% for women, and 65% for transgenders.

These differences in survival are consistent with lower use of highly active antiretroviral therapies among women and transgender AIDS cases.

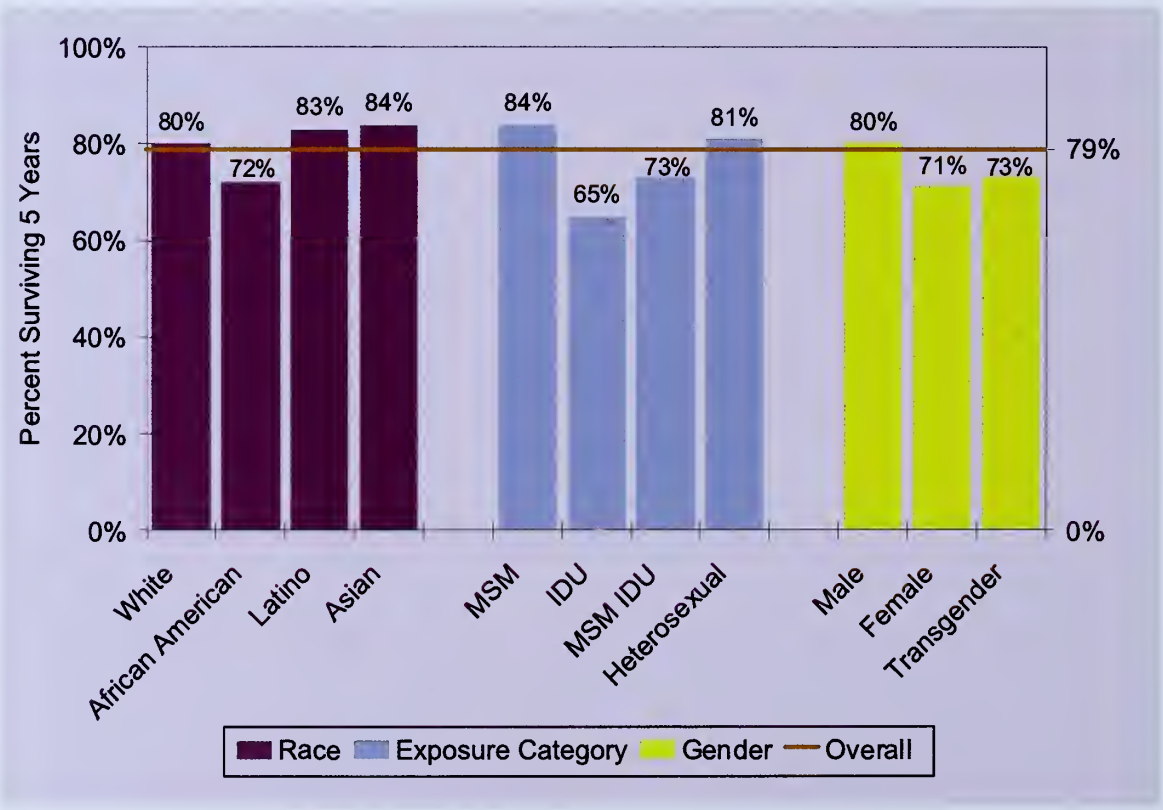
Figure 4.4 Kaplan-Meier survival* curves for persons diagnosed with AIDS between 1996 and 2006 by gender, San Francisco



* See Technical Notes "AIDS Survival."

Overall, the 5-year survival after AIDS for persons diagnosed with AIDS between 1996 and 2006 is 79% (Figure 4.5). Disparities in survival have occurred across race/ethnicity, exposure category, and gender groups. African Americans, IDU, MSM IDU, women and transgenders with AIDS had a lower proportion surviving five years compared to other groups.

Figure 4.5 Proportion surviving five years after AIDS for persons diagnosed with AIDS between 1996 and 2006 by race/ethnicity, exposure category, and gender, San Francisco



* See Technical Notes "AIDS Survival."

5 Trends in HIV/AIDS Mortality

AIDS surveillance data

Since the beginning of the epidemic, a total of 18,232 deaths have occurred among San Francisco AIDS cases as of December 31, 2006 (Table 5.1). The number of AIDS deaths was fairly steady between 2003 and 2004, and reporting of deaths in recent years is not yet complete. Cumulatively, the highest number of deaths occurred in the 30-39 year old age group; but in recent years, the largest number of deaths occurred in the 40-49 year old age group, followed by deaths occurred in the 50-59 year old age group.

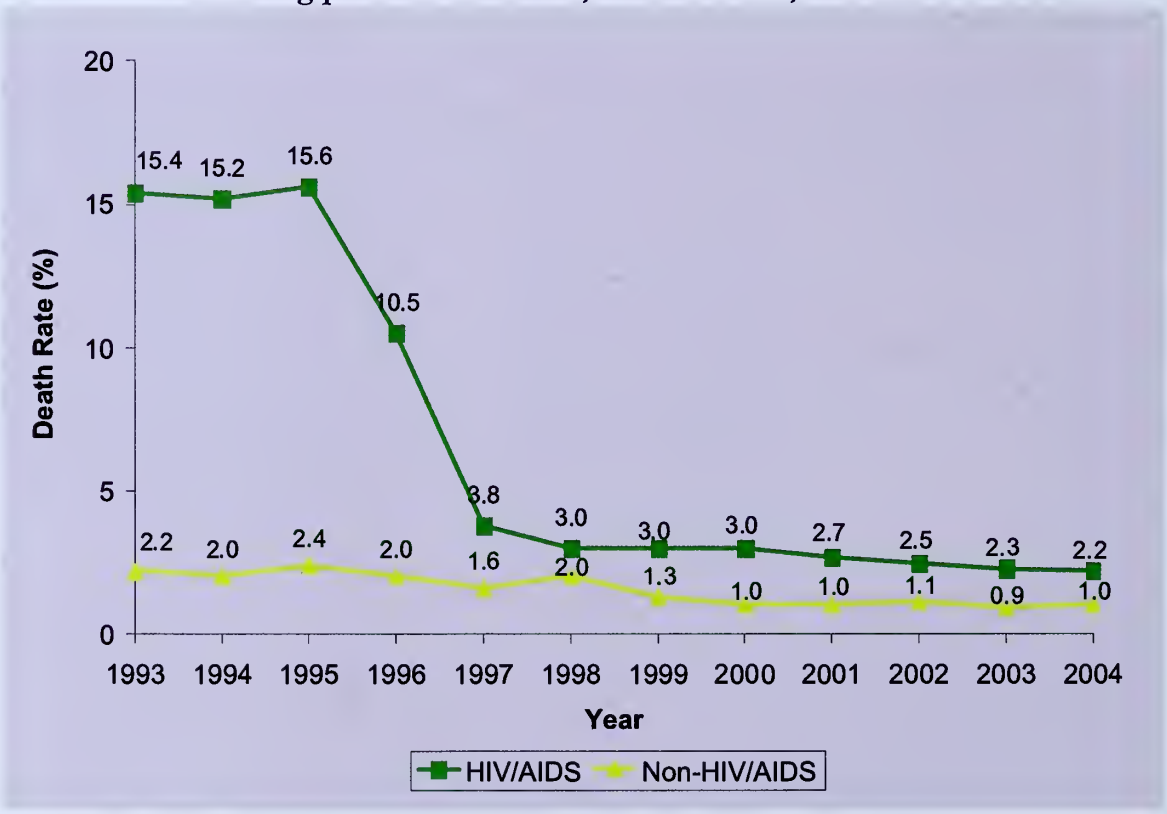
Table 5.1 Deaths in persons with AIDS, by demographic and risk characteristics, San Francisco, 2003-2006

	Year of Death								Cumulative Totals as of 12/31/2006
	2003		2004		2005*		2006*		
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	
Gender									
Male	262	(88)	266	(89)	210	(87)	167	(85)	17,474
Female	28	(9)	23	(8)	24	(10)	23	(12)	591
Transgender	8	(3)	11	(4)	8	(3)	7	(4)	167
Race/Ethnicity									
White	192	(64)	182	(61)	137	(57)	125	(63)	13,719
African American	65	(22)	63	(21)	70	(29)	40	(20)	2,197
Latino	31	(10)	36	(12)	21	(9)	20	(10)	1,775
Other	10	(3)	19	(6)	11	(5)	12	(6)	541
Exposure Category									
MSM	155	(52)	157	(52)	116	(48)	103	(52)	13,804
IDU	60	(20)	59	(20)	52	(21)	36	(18)	1,268
MSM IDU	73	(24)	71	(24)	59	(24)	50	(25)	2,734
Heterosexual	6	(2)	5	(2)	5	(2)	4	(2)	164
Other/Unidentified	4	(1)	8	(3)	10	(4)	4	(2)	262
Age at death									
0-29	5	(2)	6	(2)	2	(1)	0	(0)	1,078
30-39	51	(17)	53	(18)	29	(12)	18	(9)	7,071
40-49	129	(43)	115	(38)	106	(44)	81	(41)	6,851
50-59	78	(26)	77	(26)	70	(29)	72	(37)	2,425
60+	35	(12)	49	(16)	35	(14)	26	(13)	807
Total	**298**	**(100)**	**300**	**(100)**	**242**	**(100)**	**197**	**(100)**	**18,232**

* Data are incomplete due to reporting delay. In addition, deaths that occurred outside of San Francisco are primarily identified through matches with the National Death Index (NDI) which are complete only through 2004.

The trend in death rates in persons with AIDS was examined by their single, underlying cause of death. The death rate due to HIV/AIDS-related causes plateaued between 1993 and 1995, and then decreased from 15.6 per 100 persons with AIDS in 1995 to 2.2 per 100 persons with AIDS in 2004 (Figure 5.1). The drop in death rates beginning in 1996 reflects the impact of highly active antiretroviral therapies. For non-HIV/AIDS-related causes, the death rate in 1993 was 2.2 per 100 persons with AIDS, declining to 1.0 per 100 persons with AIDS in 2004.

Figure 5.1 Death rates* due to HIV/AIDS-related and non-HIV/AIDS-related causes among persons with AIDS, San Francisco, 1993-2004



* Death rates are calculated as the number of persons with AIDS who died each year divided by the number of total AIDS cases for that year. See Technical Notes for "Causes of Death."

The proportion of deaths in which HIV/AIDS was listed as the underlying cause of death decreased from 87% of AIDS deaths occurring in 1993-1996 to 71% in 2001-2004 (Table 5.2). Other frequently occurring underlying causes of death in 2001-2004 include non-AIDS cancer (7.1%), heart disease (5.2%), and liver disease (2.5%) which are diseases that may be due to HIV-related risk behaviors or tobacco use.

Table 5.2 Underlying causes of death among persons with AIDS*, San Francisco, 1993-2004

	Year of Death					
	1993-1996 N= 5,202		1997-2000 N= 1,472		2001-2004 N= 1,191	
Underlying Cause of Death**	No.	(%)	No.	(%)	No.	(%)
HIV/AIDS	4,510	(86.7)	1,004	(68.2)	843	(70.8)
Non-AIDS cancer	78	(1.5)	86	(5.8)	84	(7.1)
Lung cancer	24	(0.5)	12	(1.5)	26	(2.2)
Liver cancer	8	(0.2)	16	(1.1)	12	(1.0)
Heart disease	57	(1.1)	61	(4.1)	62	(5.2)
Coronary heart disease	18	(0.3)	28	(1.9)	43	(3.6)
Cardiomyopathy	5	(0.1)	12	(0.8)	5	(0.4)
Liver disease	46	(0.9)	25	(1.7)	30	(2.5)
Liver cirrhosis	12	(0.2)	11	(0.7)	15	(1.3)
Alcoholic liver disease	12	(0.2)	12	(0.8)	11	(0.9)
Drug overdose	45	(0.9)	46	(3.1)	27	(2.3)
Mental disorders due to substance use	19	(0.4)	9	(0.6)	19	(1.6)
Suicide	51	(1.0)	28	(1.9)	18	(1.5)
Chronic obstructive lung disease	20	(0.4)	13	(0.9)	18	(1.5)
Cerebrovascular disease	15	(0.3)	13	(0.9)	12	(1.0)
Viral hepatitis	61	(1.2)	44	(3.0)	7	(0.6)
Pneumonia	49	(0.9)	14	(1.0)	0	(0.0)
Aspergillosis	63	(1.2)	16	(1.1)	0	(0.0)

* Deceased AIDS cases without cause of death information are not represented in this table.
** See Technical Notes "Causes of Death."

Table 5.3 summarizes both underlying and contributory causes of death among persons with AIDS. Although persons with AIDS predominantly died of HIV/AIDS-related causes, the increasing proportion of deaths due to non-HIV/AIDS-related causes suggests that certain highly prevalent risk behaviors in this population are playing an important role in mortality trends. Co-infection with HIV and hepatitis viruses may be related to deaths associated with liver disease, viral hepatitis, and liver cancer. Smoking is likely to be related to deaths associated with lung cancer, obstructive lung disease, and coronary heart disease. Use of illicit drugs and alcohol abuse may contribute to deaths due to drug overdoses, liver disease, and mental disorders.

Table 5.3 Multiple causes of death among persons with AIDS*, San Francisco, 1993-2004

	Year of Death					
	1993-1996 N = 5,202		1997-2000 N = 1,472		2001-2004 N = 1,191	
Multiple Causes of Death**	**No.**	**(%)**	**No.**	**(%)**	**No.**	**(%)**
HIV/AIDS	4,952	(95.2)	1,257	(85.4)	1,019	(85.6)
Heart disease	804	(15.5)	268	(18.2)	247	(20.7)
Coronary heart disease	39	(0.7)	45	(3.1)	71	(6.0)
Cardiomyopathy	58	(1.1)	33	(2.2)	25	(2.1)
Liver disease	274	(5.3)	181	(12.3)	194	(16.3)
Liver cirrhosis	74	(1.4)	61	(4.1)	85	(7.1)
Alcoholic liver disease	22	(0.4)	17	(1.2)	14	(1.2)
Pneumonia	832	(16.0)	213	(14.5)	179	(15.0)
Viral hepatitis	110	(2.1)	129	(8.8)	178	(14.9)
Septicemia	324	(6.2)	134	(9.1)	129	(10.8)
Non-AIDS cancer	305	(5.9)	134	(9.1)	120	(10.1)
Lung cancer	27	(0.5)	25	(1.7)	29	(2.4)
Liver cancer	10	(0.2)	9	(0.6)	14	(1.2)
Renal disease	189	(3.6)	96	(6.5)	116	(9.7)
Mental disorders due to substance use	65	(1.2)	54	(3.7)	76	(6.4)
Chronic obstructive lung disease	57	(1.1)	42	(2.9)	58	(4.9)
Drug overdose	54	(1.0)	59	(4.0)	33	(2.8)
Cerebrovascular disease	73	(1.4)	39	(2.6)	32	(2.7)
Suicide	51	(1.0)	28	(1.9)	18	(1.5)
Aspergillosis	91	(1.7)	33	(2.2)	7	(0.6)

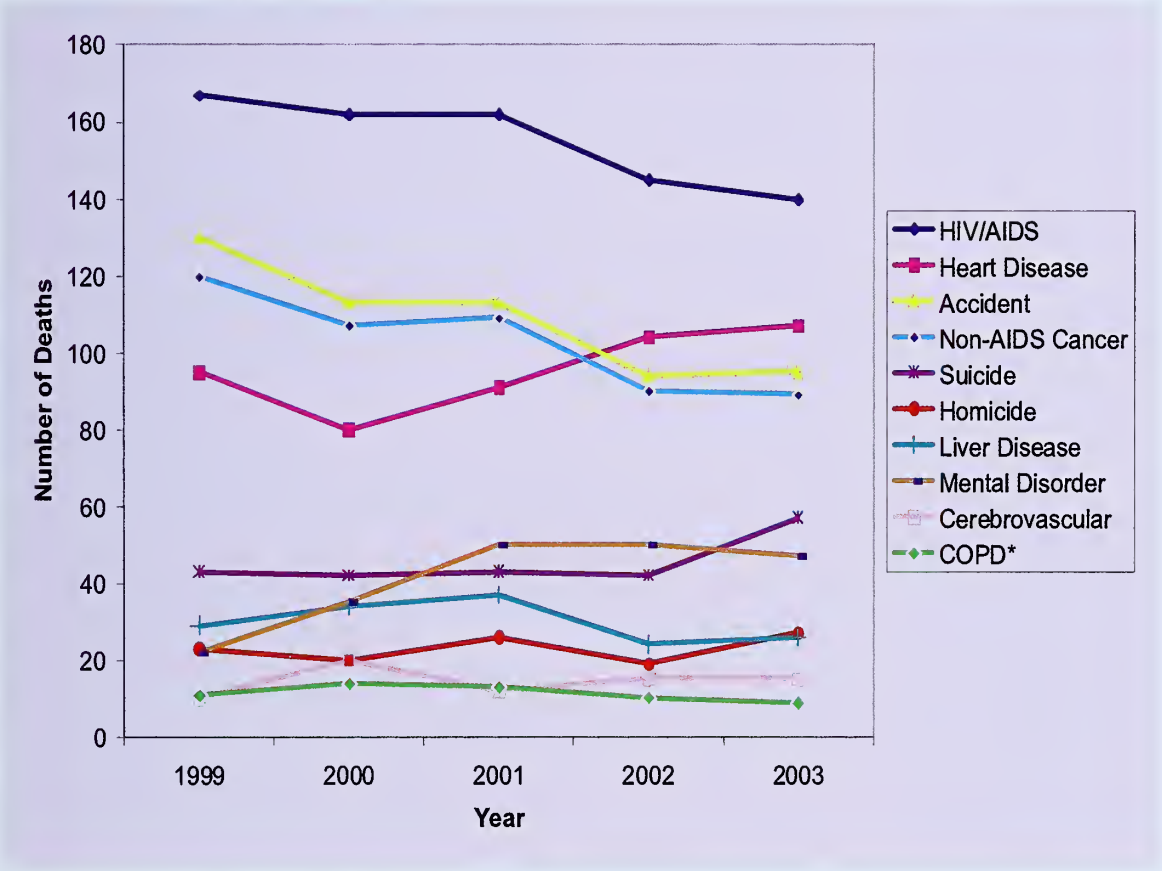
* Deceased AIDS cases without cause of death information are not represented in this table.

** Includes underlying and contributory causes of death. Individuals may have more than one cause of death. See Technical Notes "Causes of Death."

Vital statistics death data

We examined data obtained from the California Vital Statistics Death Files for San Francisco residents who died between 1999 and 2003. The cause of death was determined based on a set of ICD-10 codes representing the underlying cause of death in a fashion that is consistent with the National Vital Statistics Reports. HIV/AIDS was the leading cause of death for men aged 25-54 years in San Francisco between 1999 and 2003 (Figure 5.2). The number of deaths due to HIV/AIDS declined during this time period. Accidents were the second leading cause of death for men in this age group, followed closely by non-AIDS related cancers between 1999 and 2001. In 2002, heart disease exceeded accidents and non-AIDS cancer to become the second leading cause of death.

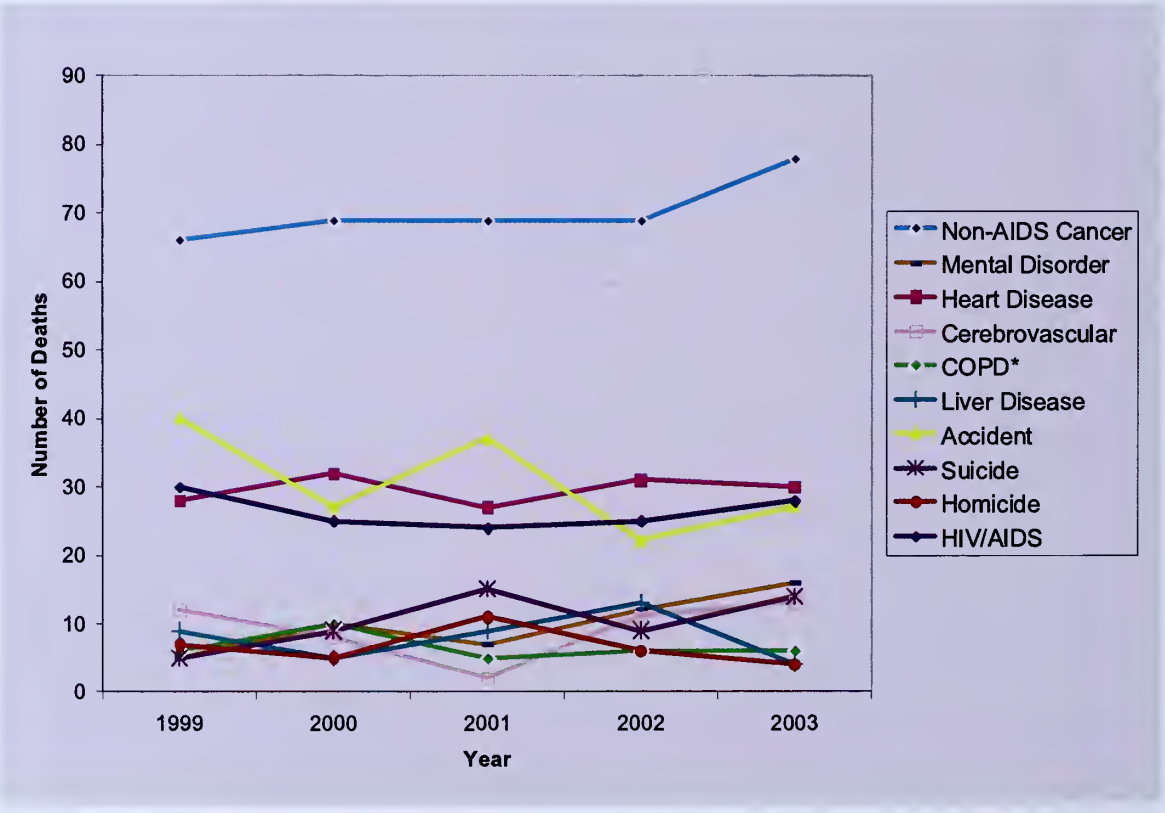
Figure 5.2 Leading causes of death among San Francisco male residents aged 25-54 years, 1999 - 2003



* COPD: chronic obstructive pulmonary disease.

Compared to men, the number of deaths due to HIV/AIDS for women was much smaller. In 2003, 140 men aged 25-54 years died of HIV/AIDS and 28 women in the same age group died of HIV/AIDS. HIV/AIDS ranked third in the causes of death for women aged 25-54 years in 2003 (Figure 5.3).

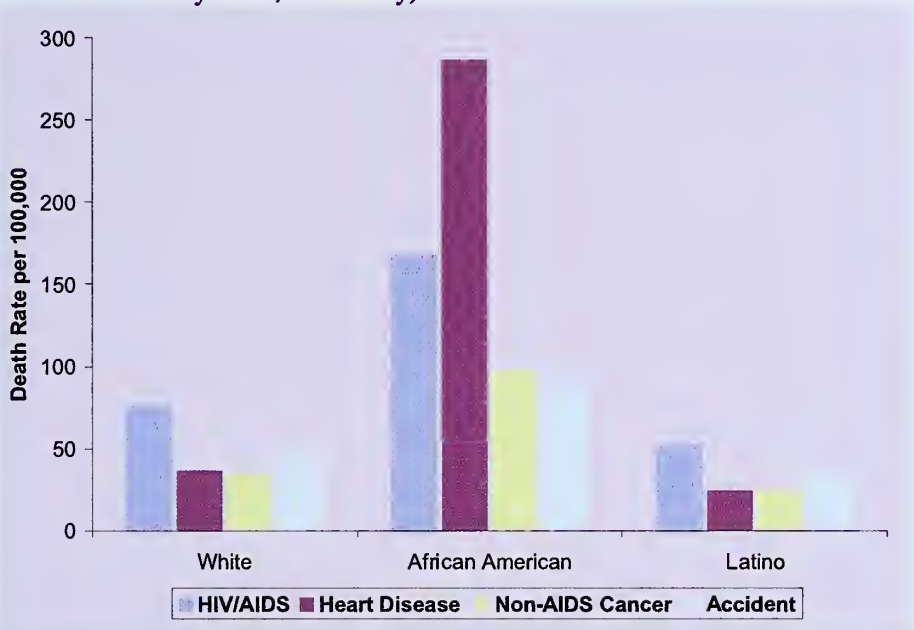
Figure 5.3 Leading causes of death among San Francisco female residents aged 25-54 years, 1999-2003



* COPD: chronic obstructive pulmonary disease.

For white and Latino men aged 25-54 years, HIV/AIDS was the leading cause of death in 2003, followed by accidents, heart disease and cancer (Figure 5.4). For African American men, HIV/AIDS was the second leading cause of death, next to heart disease. Although HIV/AIDS was not the leading cause of death for African American men, the death rate of HIV/AIDS for African American men aged 25-54 years (168 per 100,000) was higher than that for white men (76 per 100,000) and Latino men (52 per 100,000).

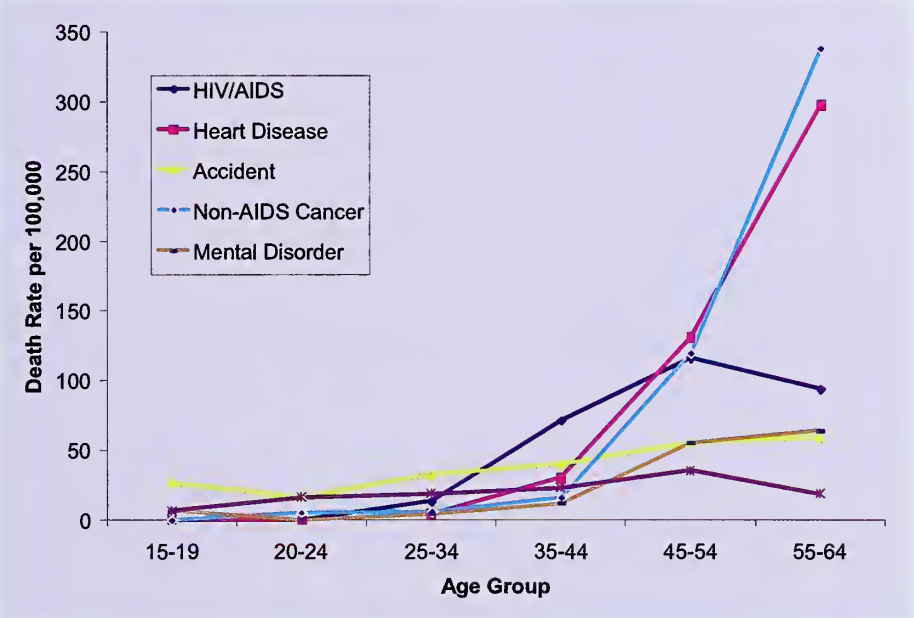
Figure 5.4 Leading causes of death rates per 100,000 population among San Francisco male residents* aged 25-54 years by race/ethnicity, 2003



* Population denominator obtained from State of California, Department of Finance, Race/Ethnic Population with Age and Sex detail 2000-2050 data file.

The age-specific death rates increased by age for causes related to heart disease, cancer, accident, and mental disorder from substance use (Figure 5.5). The death rate of HIV/AIDS ranked third for those aged 25-34 years (13 per 100,000), was prominent for those aged 35-44 years (71 per 100,000), and was close to the death rate of heart disease and cancer for those aged 45-54 years (116 per 100,000).

Figure 5.5 Leading causes of death rates per 100,000 population among San Francisco male residents* aged 15-64 years by age group, 2003

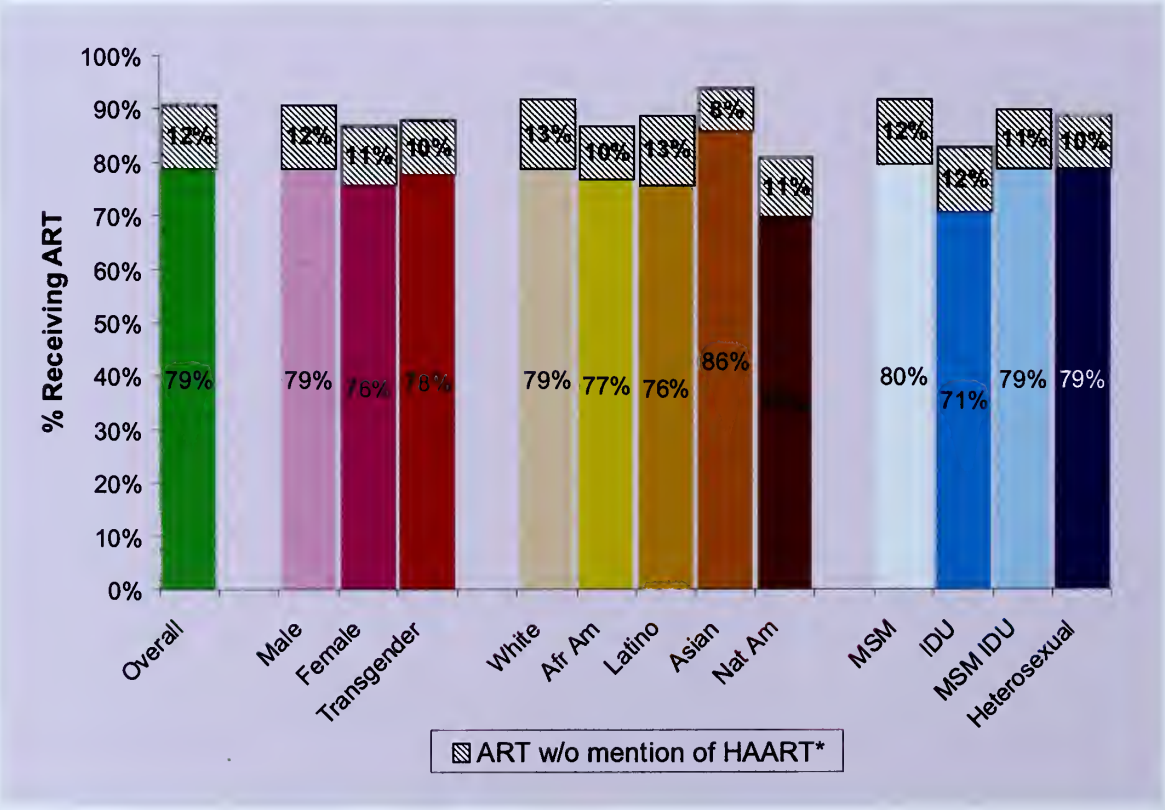


* Population denominator obtained from State of California, Department of Finance, Race/Ethnic Population with Age and Sex detail 2000-2050 data file.

6 Use of Antiretroviral Therapy among Persons with AIDS

Figure 6.1 shows an estimate of ART use among persons living with AIDS as of December 31, 2006. This includes those who moved outside of San Francisco or who were lost to follow up. Therefore, the ascertainment of treatment in this population may be incomplete resulting in a conservative or lower level estimate of ART use. Overall, a minimum estimate of 79% of persons living with AIDS received the form of ART known to be highly active antiretroviral therapy (HAART) which includes a protease inhibitor or a non-nucleoside reverse transcriptase inhibitor. An additional 12% of persons who initiated ART either did not include HAART or information regarding the type of ART or change in treatment regimen was not available. Although the disparity in ART use still exists by gender, race/ethnicity, and risk group, the gap appears to be smaller than previously observed. Use of ART was especially low among injection drug users and Native Americans.

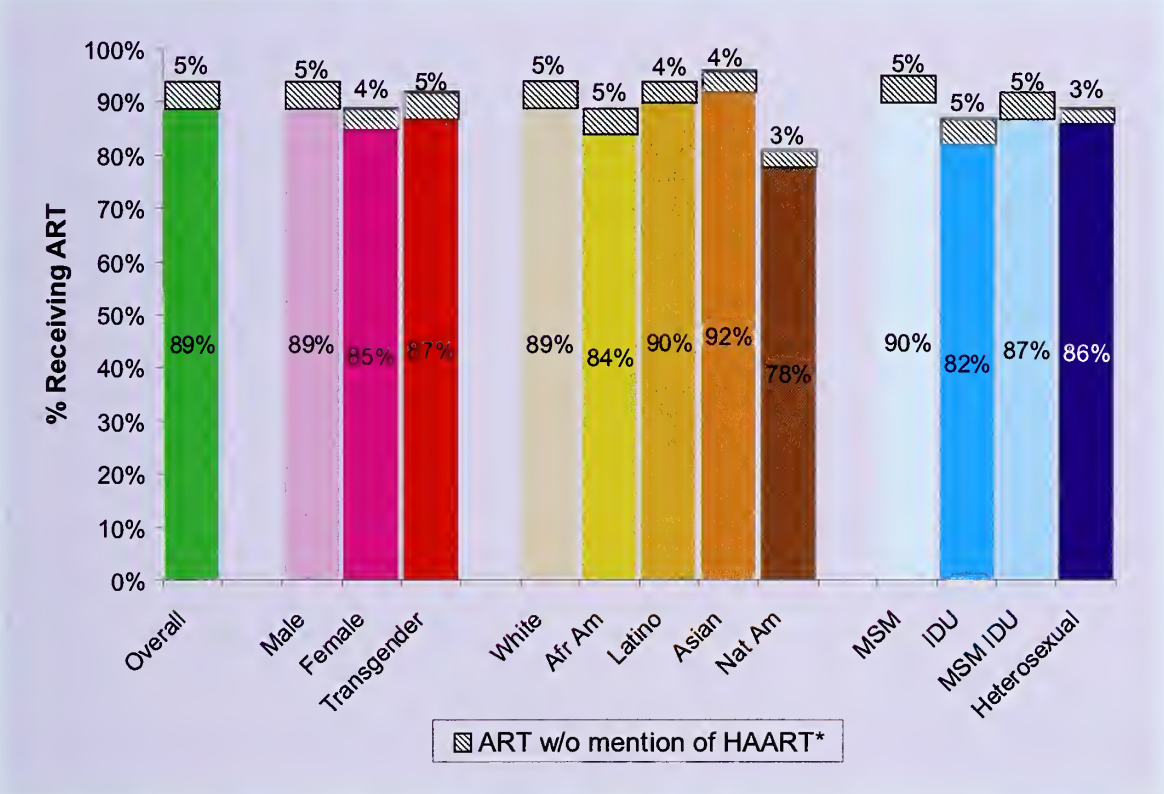
Figure 6.1 Lower level estimate of antiretroviral therapy use among persons living with AIDS by gender, race/ethnicity, and exposure category, San Francisco, December 2006



* Shaded areas indicate patients who are known to have started ART but the type of ART does not refer to the highly active antiretroviral therapy (HAART) or such information is not available.

Figure 6.2 shows ART use among persons living with AIDS after excluding those who moved outside of San Francisco or were lost to follow-up (e.g., no updated information available for more than two years). Because treatment information is less complete on these patients, excluding them provides an upper level estimate of ART use. Overall, 89% of persons with AIDS received HAART including a protease inhibitor or a non-nucleoside reverse transcriptase inhibitor; an additional 5% are known to have received ART but without including or specifying use of HAART. It is estimated, based on this methodology, that 6% of persons living with AIDS in San Francisco did not receive any antiretroviral therapy.

Figure 6.2 Upper level estimate of antiretroviral therapy use among persons living with AIDS by gender, race/ethnicity, and exposure category, San Francisco, December 2006



* Shaded areas indicate patients who are known to have started ART but the type of ART does not refer to the highly active antiretroviral therapy (HAART) or such information is not available.

7 Insurance Status at Time of HIV/AIDS Diagnosis

Insurance status at the time of AIDS diagnosis differs by gender. There was a higher proportion of male AIDS cases with private insurance than female and transgender AIDS cases (Figure 7.1). The majority of female AIDS cases had public insurance. The proportion of transgender AIDS cases with no insurance decreased from 71% in 2001 to 13% in 2006. In general, the proportion of male, female and transgender AIDS cases with public insurance increased between 2001 and 2006, while the proportion with no insurance declined.

For AIDS cases diagnosed between 2001 and 2006, 94% of transgenders and 84% of women were underinsured (i.e. having no insurance or public insurance), compared to 54% of men (Figure 7.2).

Figure 7.1 Trends in insurance status among persons with AIDS by gender, San Francisco, 2001-2006

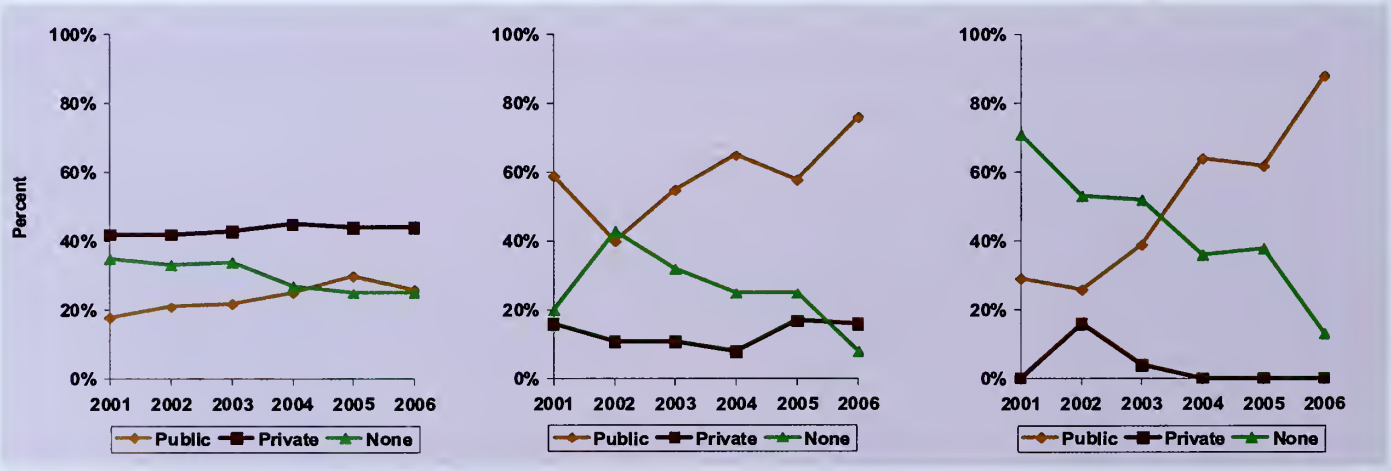
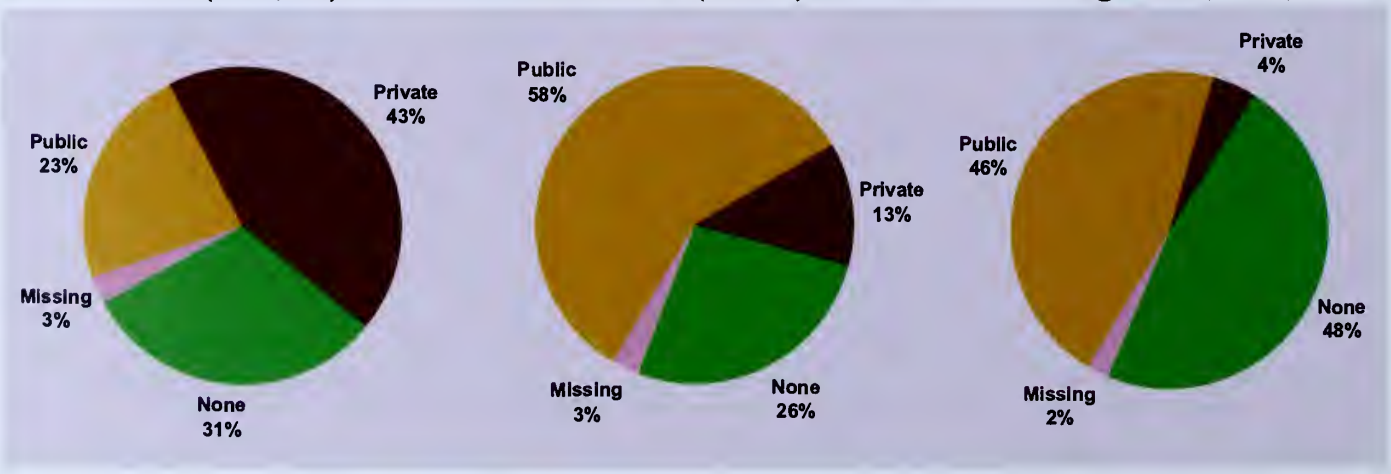


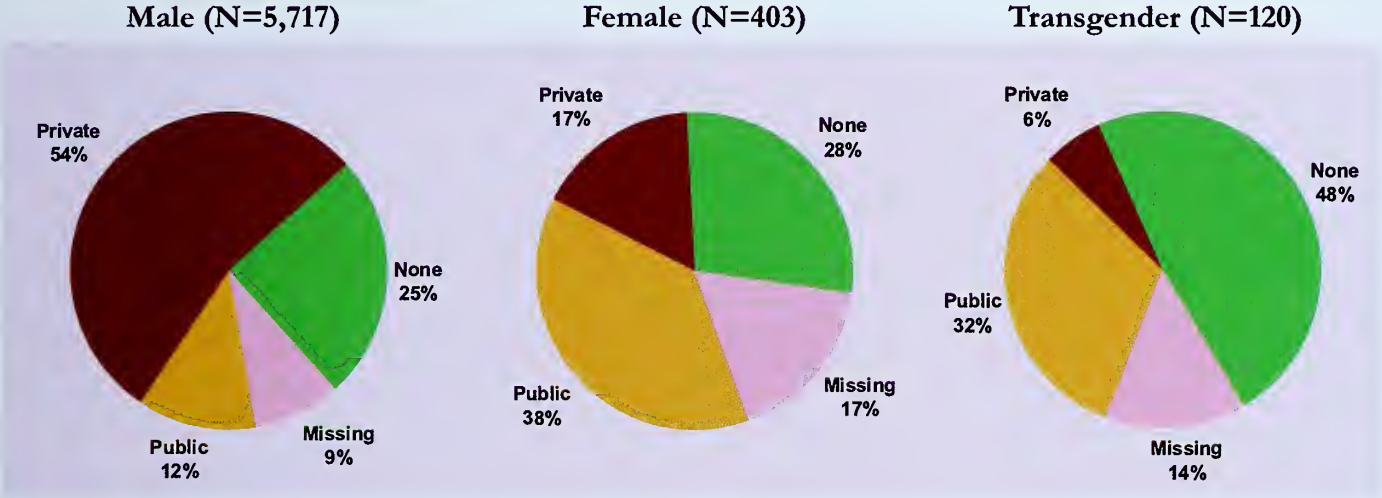
Figure 7.2 AIDS cases by gender and insurance status at diagnosis, San Francisco, 2001-2006



We examined the insurance status for HIV non-AIDS cases reported between 2002 and 2006. This included cases diagnosed before and during this time period. Compared to AIDS cases (Figure 7.2), a higher proportion of HIV non-AIDS cases had private insurance (Figure 7.3). There was also a greater percentage of HIV non-AIDS cases for whom the insurance status was not available. HIV non-AIDS cases without insurance information reported were mainly those tested at confidential testing sites or cases whose follow-up information could not be obtained from the health care providers (e.g., reported with a non-name code).

Similar to AIDS cases, a gender disparity in insurance status was observed among HIV non-AIDS cases. Thirty-seven percent of male HIV non-AIDS cases were under-insured, compared to 66% of female and 80% of transgender HIV non-AIDS cases (Figure 7.3).

Figure 7.3 HIV non-AIDS cases by gender and insurance status at diagnosis, San Francisco, cases reported in 2002-2006

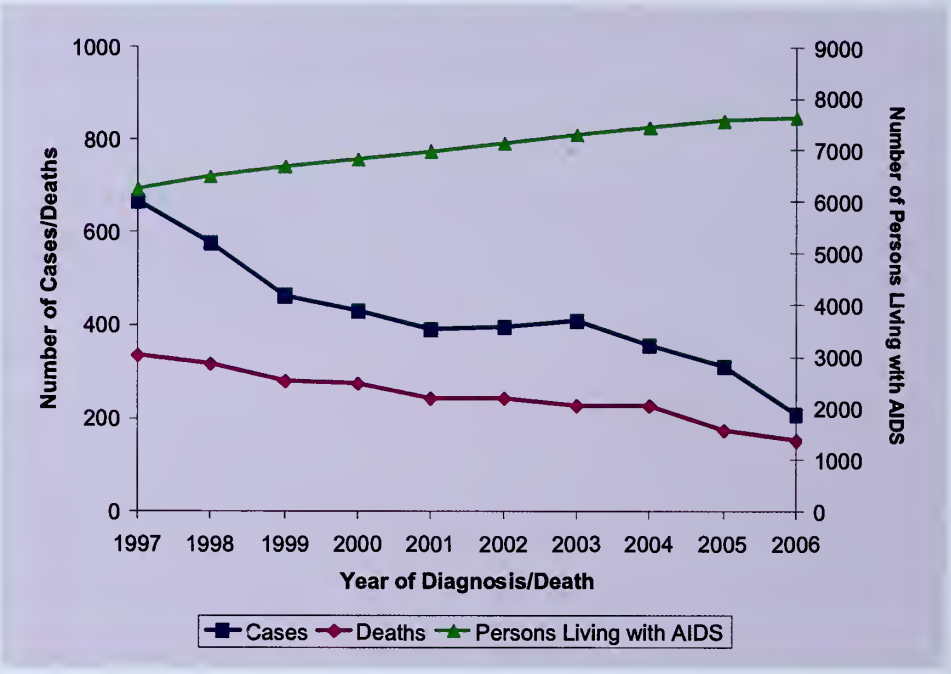


8 HIV/AIDS among Men Who Have Sex with Men

AIDS surveillance data

While the numbers of new AIDS cases and AIDS deaths among MSM have continued to decline, the number of MSM living with AIDS continues to rise (Figure 8.1). This is due in part to improved treatment for persons with AIDS. In 2006, there were 7,629 MSM living with AIDS in San Francisco.

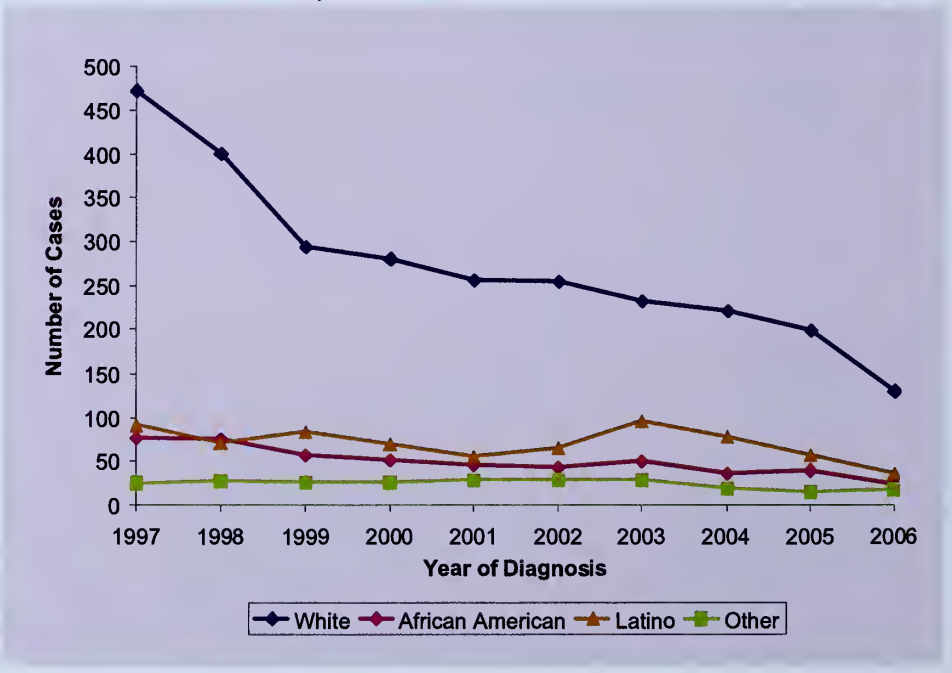
Figure 8.1 AIDS cases, deaths, and prevalence among MSM*, San Francisco, 1997-2006



* Includes MSM and MSM IDU.

The majority of San Francisco AIDS cases are white MSM. Although the number of AIDS cases has declined among all MSM, whites still account for the largest number of MSM AIDS cases, followed by Latino MSM.

Figure 8.2 AIDS cases among MSM* by race/ethnicity, San Francisco, 1997-2006



* Includes MSM and MSM IDU.

HIV sexual behavior data

The Stop AIDS Project

The Stop AIDS Project collects information on sexual behavior and self-reported HIV status through the course of outreach HIV prevention activities for MSM in San Francisco. Their data provide an opportunity to track annual trends in HIV-related risk behavior in a large, community-recruited sample of MSM.

Figure 8.3 illustrates trends in unprotected anal intercourse (UAI) from 1999 through 2006 by self-reported HIV serostatus. An overall trend of increasing UAI is apparent among HIV-positive as well as HIV-negative MSM for the whole time period. Figure 8.3 also illustrates that UAI is most commonly reported by HIV-positive MSM.

Figure 8.4 shows the proportion of MSM who report having UAI with one or more sex partners whose HIV status was not known to them. This measure most closely gauges the potential for HIV transmission to occur by excluding sex between individuals known to be of the same HIV status. Overall UAI with potentially HIV-serodiscordant men peaked in 2001. Following a downward trend beginning in 2001, it appears that the percent of men engaging in UAI with potentially HIV serodiscordant partners has levelled off to about 10% to 13% in 2006.

Figure 8.3 Percent of MSM reporting unprotected anal intercourse in the last six months by self-reported HIV status, the Stop AIDS Project, San Francisco, 1999-2006

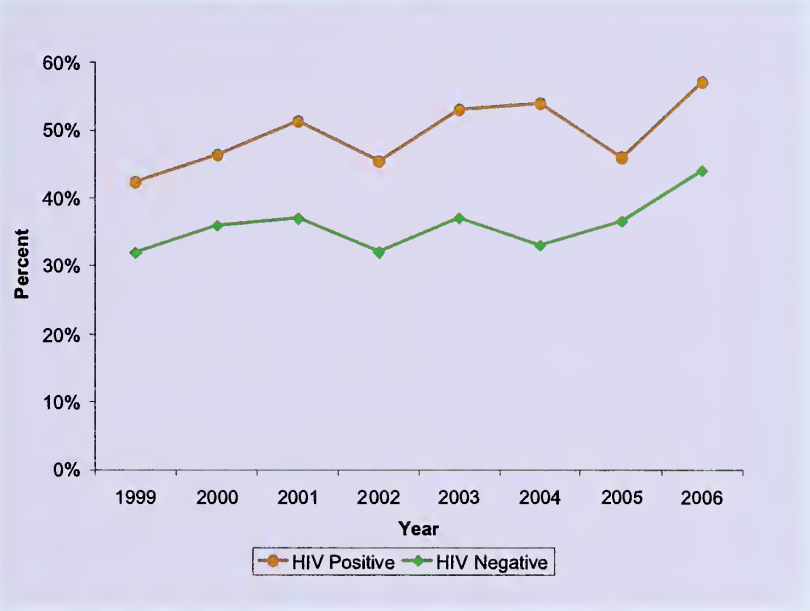
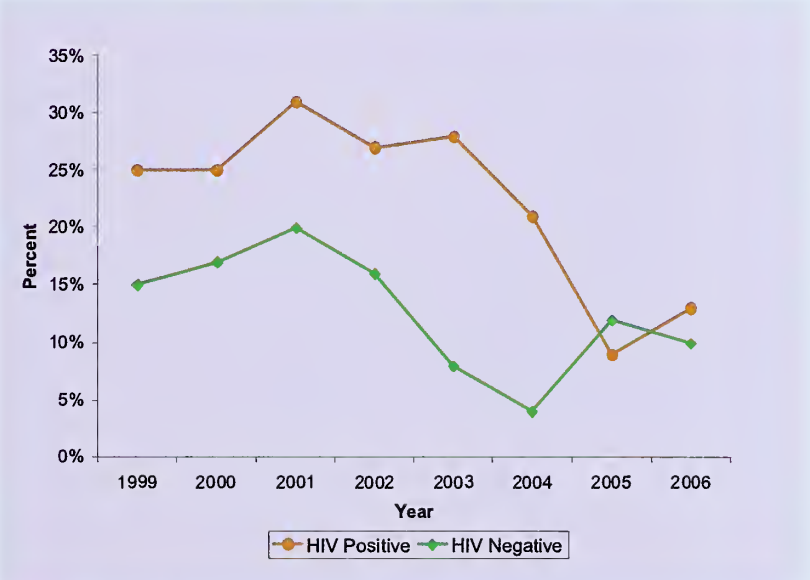


Figure 8.4 Percent of MSM reporting unprotected anal intercourse in the last six months with at least one partner of unknown HIV status*, the Stop AIDS Project, San Francisco, 1999-2006



* For MSM who did not know or report their HIV status, any UAI was considered potentially serodiscordant.

Sexually transmitted diseases among MSM

Figure 8.5 shows trends in male rectal gonorrhea and male gonococcal proctitis in San Francisco from 1997 through 2006. Data on male rectal gonorrhea originate from case reporting from laboratories and health providers throughout the city. Data on male gonococcal proctitis originate from the municipal STD clinic only. Infection with gonorrhea is a biological marker for high risk sexual behavior as well as a factor that enhances the acquisition and spread of HIV. Among men, rectal gonorrhea is a marker for unprotected receptive anal sex.

The last several years have seen a steady increase in reported cases of male rectal gonorrhea. Male gonococcal proctitis are cases with symptomatic infection. Data on male gonococcal proctitis suggest that some of the increase in reported male rectal gonorrhea may be due to increased screening.

Data may underestimate true levels of infections due to several factors, including lack of rectal screening by many health providers, under reporting, delayed reporting, and a large proportion of cases that do not manifest symptoms.

Figure 8.5 Male rectal gonorrhea and male gonococcal proctitis among MSM, San Francisco, 1997-2006

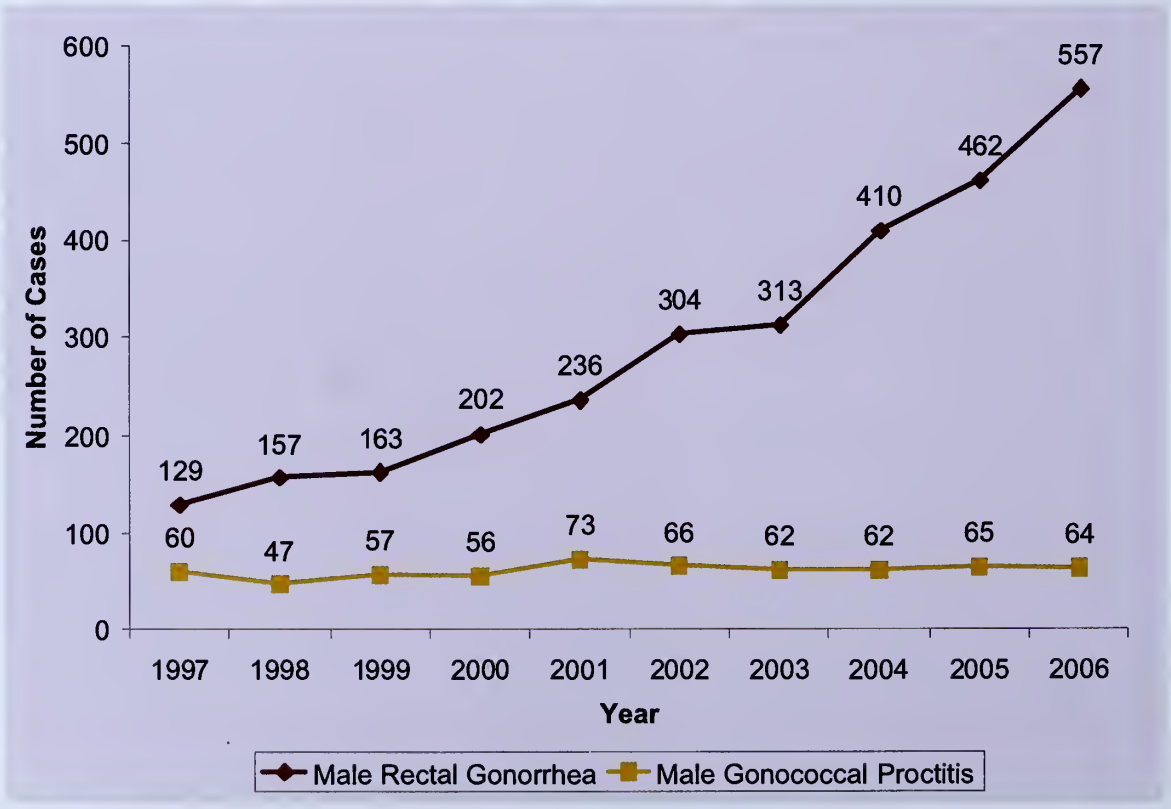
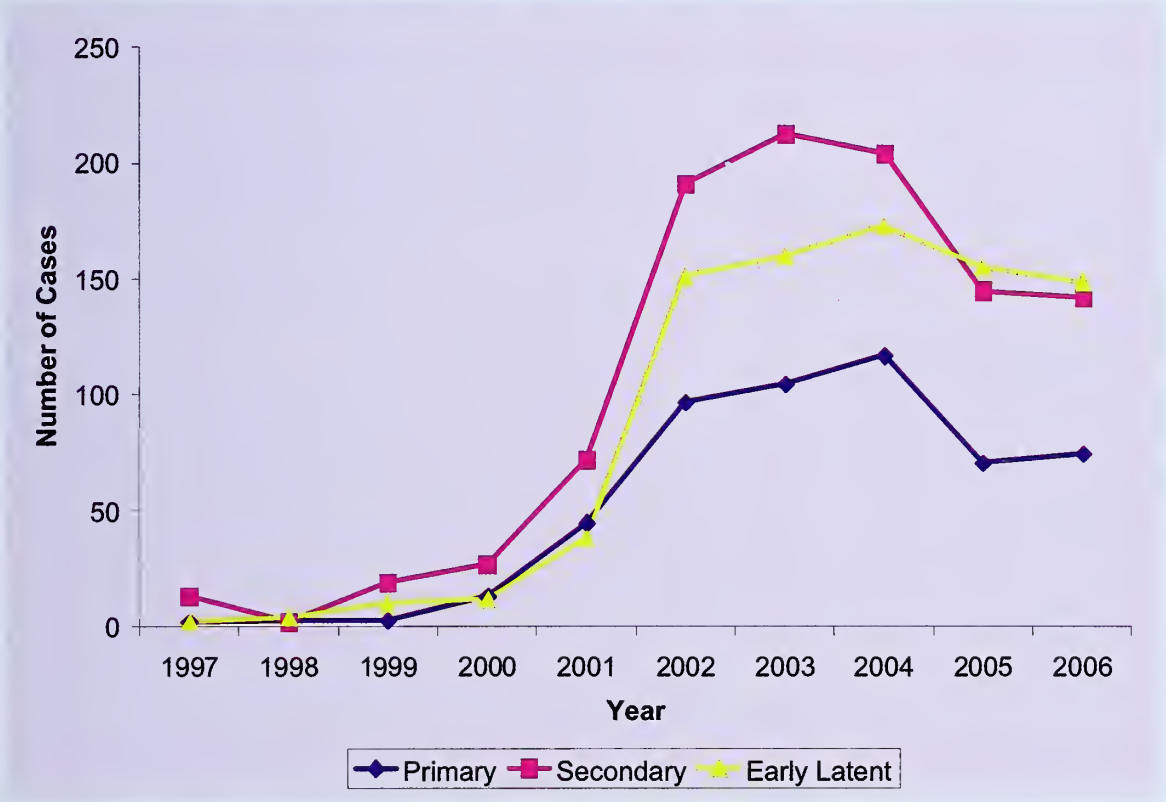


Figure 8.6 shows trends in primary, secondary, and early latent cases of syphilis among MSM in San Francisco from 1997 through 2006. Data originate from case reporting from laboratories and health providers throughout the city although the majority are patients seen at the municipal STD clinic. Like gonorrhea, syphilis is a biological marker for high risk sexual behavior as well as a factor that enhances the acquisition and spread of HIV. The increase in early syphilis among MSM in San Francisco since 1998 is dramatic. However, in 2005, for the first time since this rapid rise, early syphilis among MSM declined.

Figure 8.6 Syphilis among MSM, San Francisco, 1997-2006



9 HIV/AIDS among Injection Drug Users

Injection drug use by non-MSM is the third most frequent exposure group among cumulative AIDS cases in San Francisco, behind MSM and MSM IDU. This fact contrasts national AIDS data where non-MSM IDU are the second most frequent exposure group among all cases. The number of new AIDS cases among non-MSM IDU has continued to decline. In recent years, similar numbers of deaths and new AIDS cases have resulted in a steady number of non-MSM IDU living with AIDS. As of December 31, 2006, there were 792 non-MSM IDU living with AIDS in San Francisco.

African Americans accounted for the greatest number of AIDS cases among non-MSM IDU during the majority of 1997-2006 (Figure 9.2). Whites accounted for the second greatest number of cases in this risk group.

Figure 9.1 AIDS cases, deaths, and prevalence among non-MSM IDU, San Francisco, 1997-2006

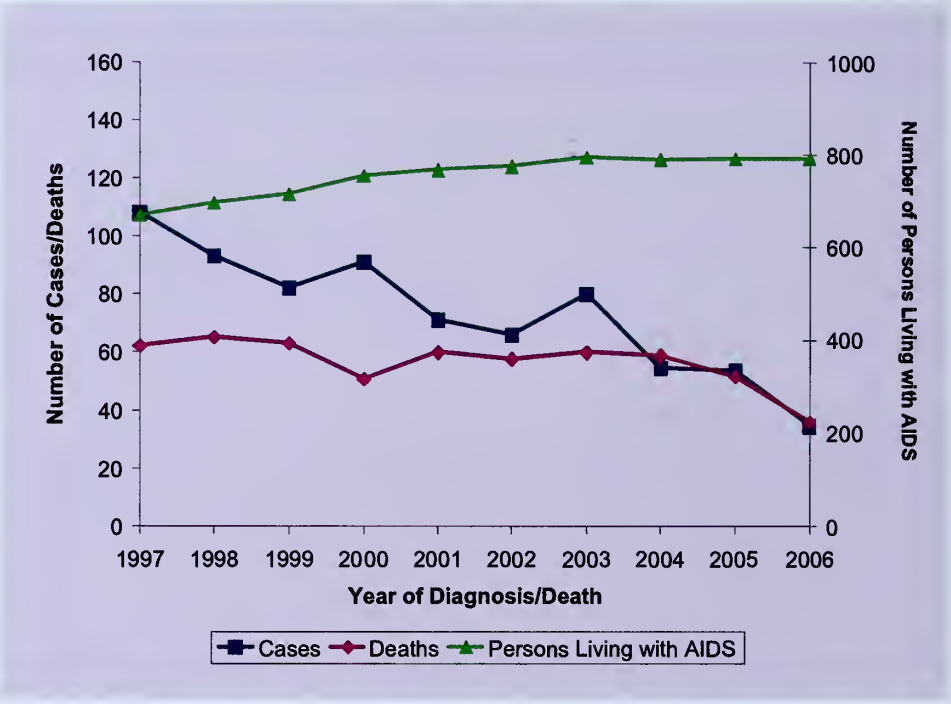


Figure 9.2 AIDS cases among non-MSM IDU by race/ethnicity, San Francisco, 1997-2006

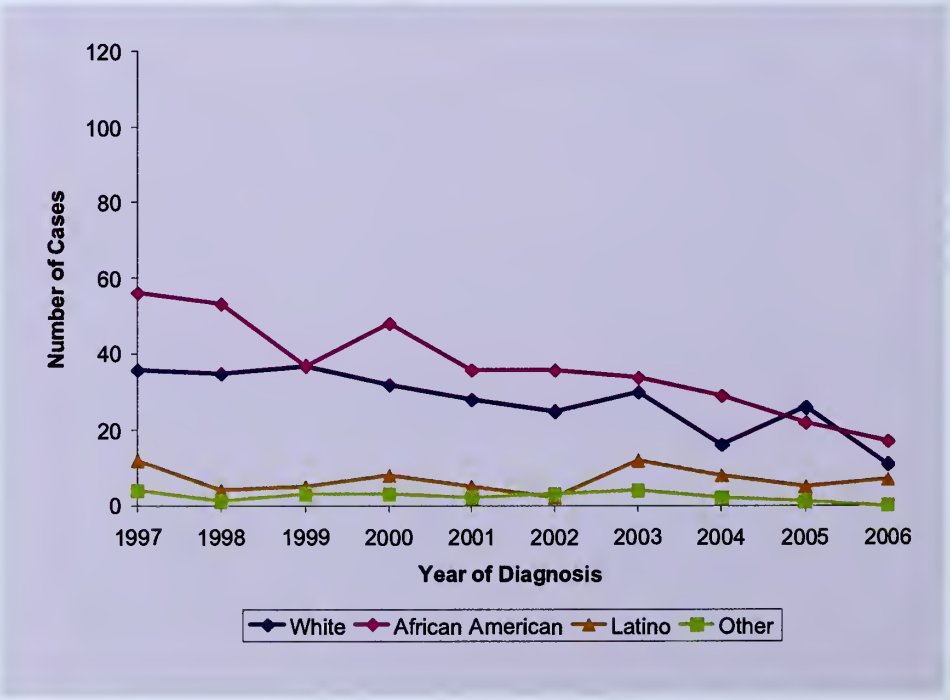


Table 9.1 shows the risk and race/ethnicity distribution of AIDS cases directly and indirectly associated with injection drug use. MSM IDU account for the majority (64%) of IDU-associated AIDS cases followed by male heterosexual IDU (22%). Of the MSM IDU cases, 71% are white and 16% are African American. This is a marked difference from the heterosexual male and female IDU AIDS cases, where African Americans represent 49% and 53%, respectively.

Table 9.1 Injection drug use-associated AIDS cases by exposure category and race/ethnicity, diagnosed through December 2006, San Francisco

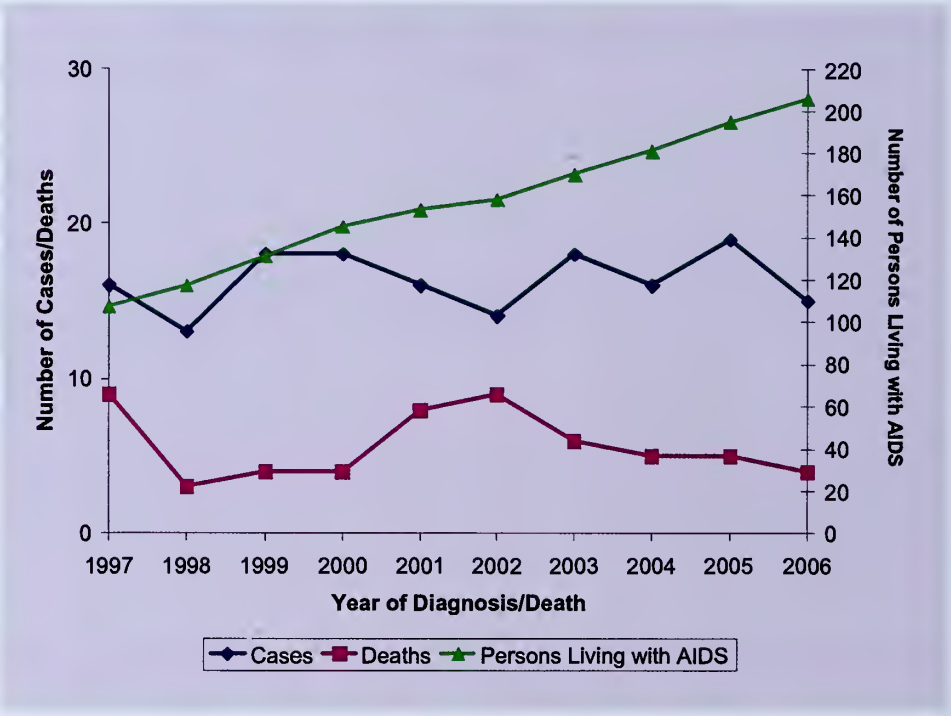
		Race/Ethnicity Distribution by Percent			
Exposure Category	Total Number	White	African American	Latino	Other
Male heterosexual IDU	1,356	36%	49%	12%	2%
Female heterosexual IDU	660	32%	53%	10%	5%
MSM IDU	3,997	71%	16%	10%	3%
Lesbian IDU	44	48%	34%	11%	7%
Heterosexual contact with IDU	143	34%	43%	15%	8%
Children whose mothers are IDUs or mother's sex partners are IDUs	23	22%	43%	17%	17%

10 HIV/AIDS among Heterosexuals

AIDS surveillance data

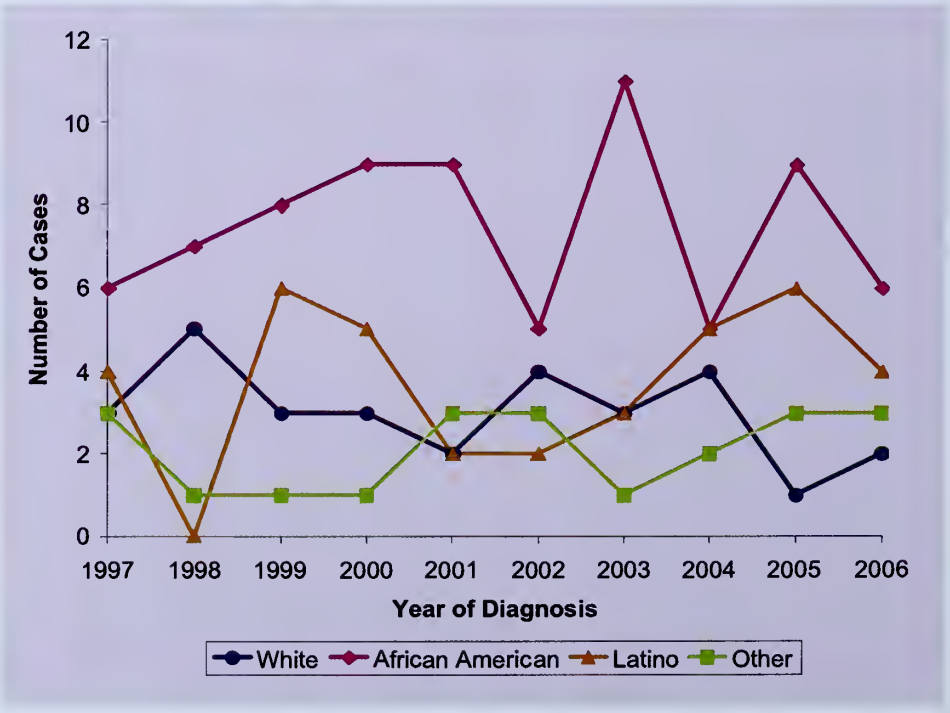
The number of AIDS cases among persons who acquired HIV infection through heterosexual contact is small relative to other risk groups. The number of deaths among non-IDU heterosexuals has declined while the number of AIDS cases diagnosed each year is within the range of 13 to 19 cases. The number of non-IDU heterosexuals living with AIDS has increased to a total of 206 by December 31, 2006.

Figure 10.1 AIDS cases, deaths, and prevalence among heterosexuals, San Francisco, 1997-2006



Trends in heterosexual AIDS cases by race/ethnicity fluctuate from year to year due to the small number of cases (Figure 10.2). Overall, African American heterosexuals account for the greatest number of AIDS cases since 1997, followed by Latinos.

Figure 10.2 AIDS cases among heterosexuals by race/ethnicity, San Francisco, 1997-2006



The majority of heterosexually-acquired AIDS cases are women (Table 10.1). Among women in this risk group, sex with an IDU and sex with an HIV-infected partner of unknown risk were both reported as the most frequent exposure category (41%). Sex with an HIV-infected partner of unknown risk factor was the most frequent exposure category (64%) for men in this risk group.

Table 10.1 AIDS cases among heterosexuals by exposure category and gender, diagnosed through December 2006, San Francisco

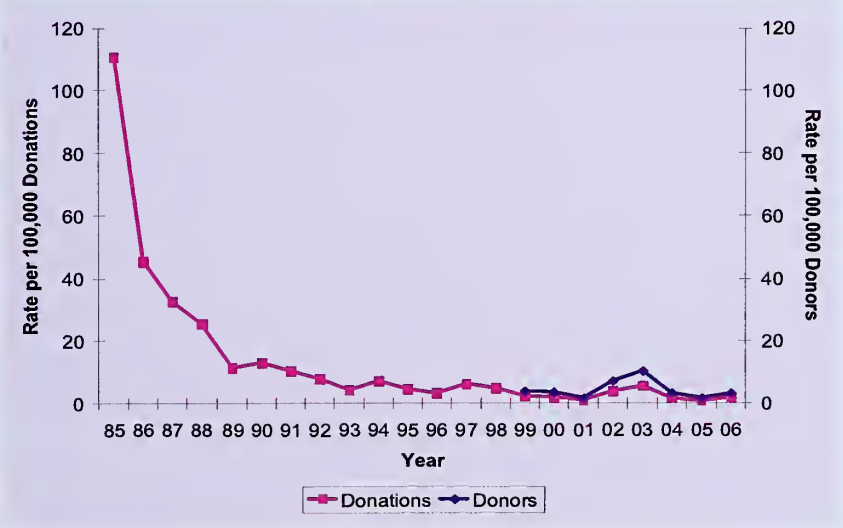
	Men		Women	
Exposure Category	**Number**	**%**	**Number**	**%**
Sex with injection drug user	34	33%	109	41%
Sex with bisexual men	N/A	N/A	46	17%
Sex with HIV+ transfusion recipient	<5	-	<5	-
Sex with HIV+ persons of unknown risk	67	64%	108	41%

HIV prevalence data

Blood Donations

HIV prevalence data among blood donations (keep in mind that multiple donations can be made by one donor) are available from 1985 to 2006, and the data among unique donors are available from 1999 to 2006. The proportion of blood donors and blood donations testing HIV-positive has remained low and stable since the early 1990s (Figure 10.3). Blood donation is voluntary and donors are pre-screened for risk factors associated with HIV infection prior to giving blood. Although blood donors constitute a large population of heterosexual non-injection drug users, interpretation of these data must take into account that only persons at lowest risk for HIV are encouraged to donate blood.

Figure 10.3 HIV prevalence rate among blood donations and donors through 2006, San Francisco Bay Area



Sexually transmitted diseases among heterosexuals

Figure 10.4 shows the annual number of primary, secondary, and early latent cases of syphilis among heterosexual men in San Francisco from 1997 through 2006. Data originate from case reporting from laboratories and health providers throughout the city, although the majority are patients seen at the municipal STD clinic. Compared to MSM, syphilis among heterosexual men remains relatively low in recent years.

Figure 10.4 Syphilis among heterosexual men, San Francisco, 1997-2006

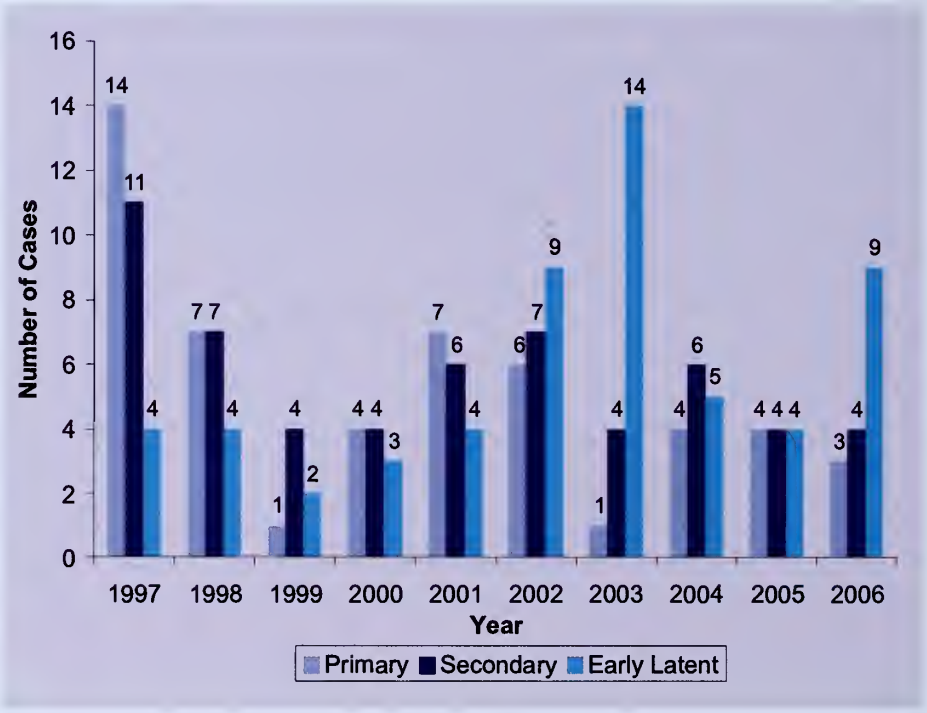
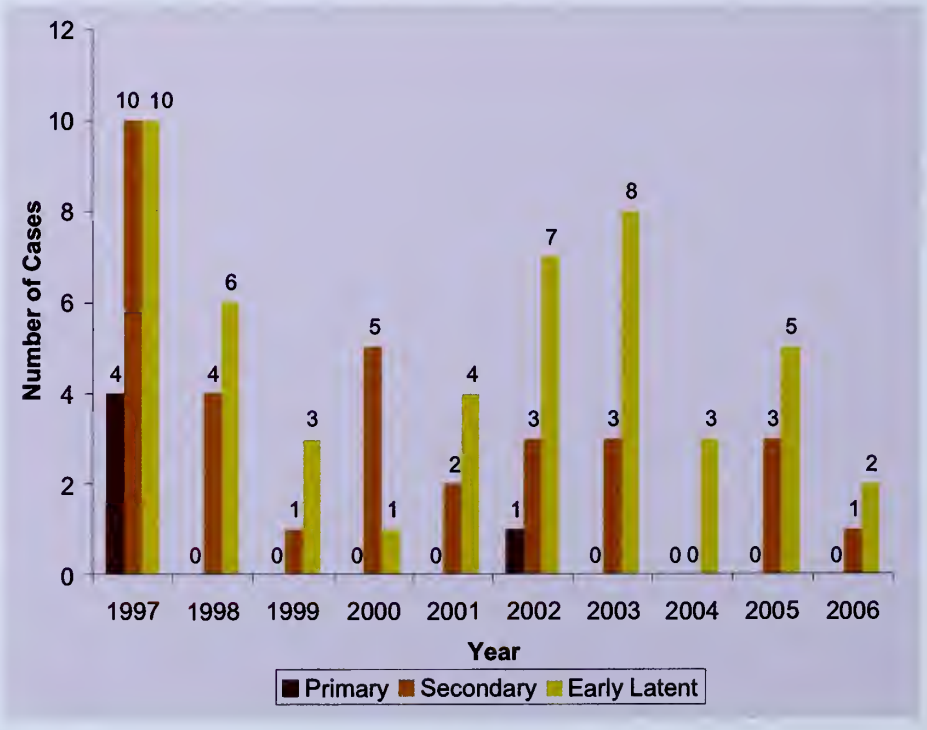


Figure 10.5 shows the annual number of primary, secondary, and early latent cases of syphilis among women in San Francisco from 1997 through 2006. Data originate from case reporting from laboratories and health providers throughout the city, although the majority are patients seen at the municipal STD clinic. Among women, syphilis cases are low and stable in recent years.

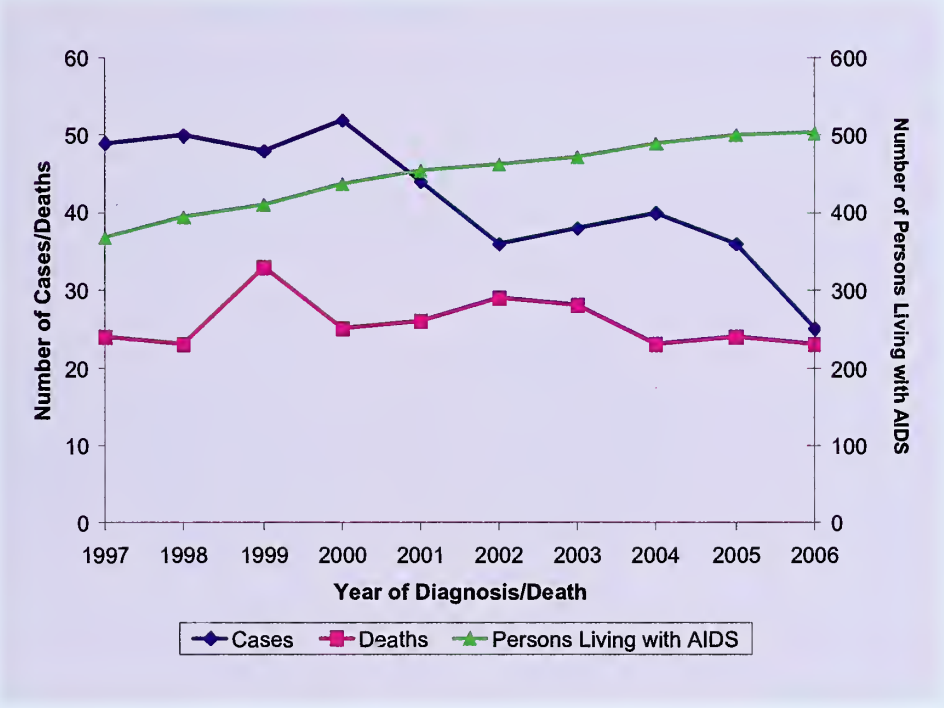
Figure 10.5 Syphilis among women, San Francisco, 1997- 2006



11 HIV/AIDS among Women

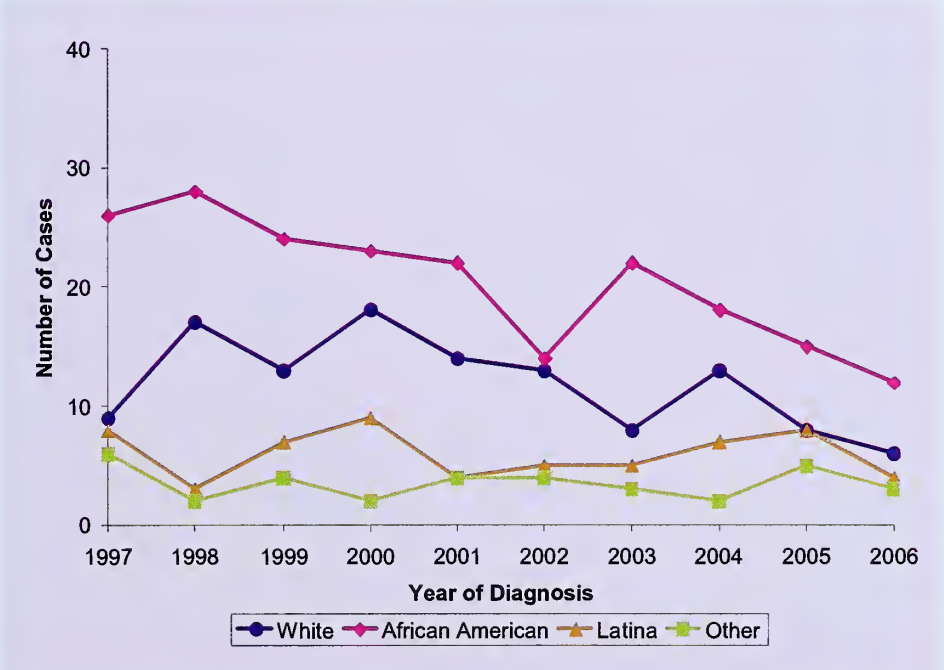
The number of AIDS cases among women in San Francisco declined while the number of deaths remained stable through 2006 (Figure 11.1). As of December 31, 2006 there were 503 women living with AIDS.

Figure 11.1 AIDS cases, deaths, and prevalence among women, San Francisco, 1997-2006



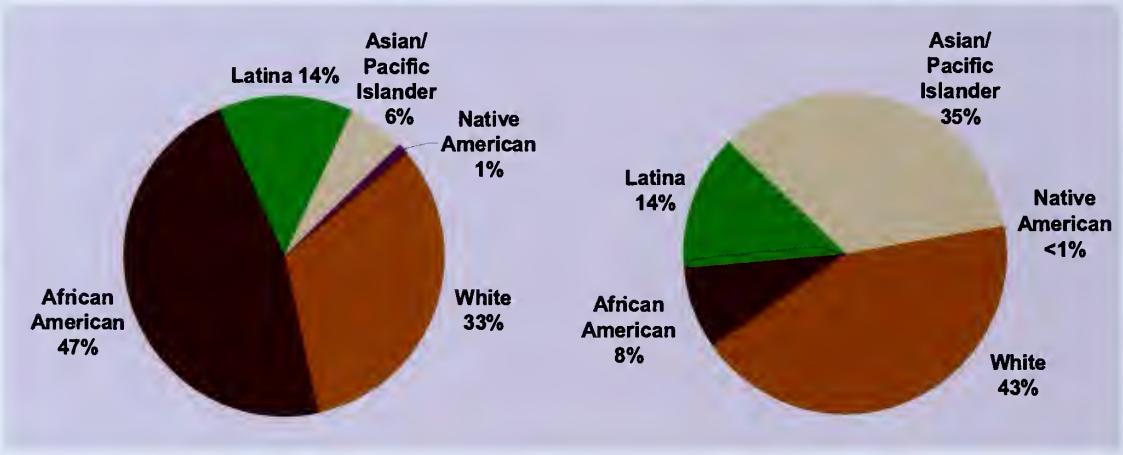
African American women represent the highest number of newly diagnosed female AIDS cases in comparison to other racial/ethnic groups from 1997-2006 (Figure 11.2).

Figure 11.2 Female AIDS cases by race/ethnicity, San Francisco, 1997-2006



African American women are disproportionately affected by AIDS in San Francisco. Although African American women represent 8% of the female population, they account for 47% of the female AIDS cases in San Francisco (Figure 11.3).

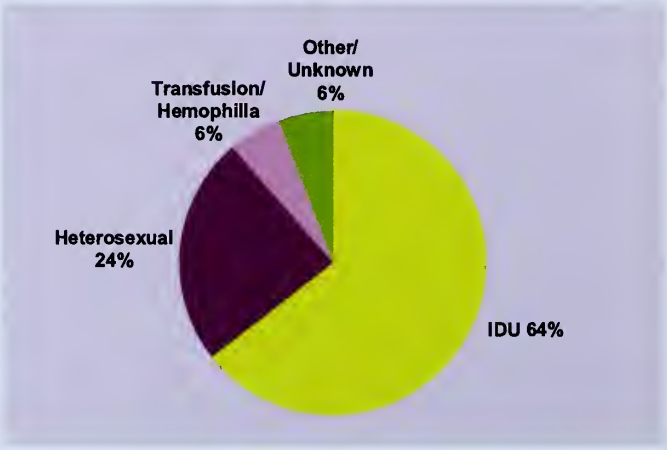
Figure 11.3 Female AIDS cases diagnosed through December 2006 and female population by race/ethnicity, San Francisco



* United States 2000 Census data.

Injection drug use (64%) is the most prominent risk exposure for women with AIDS, followed by heterosexual contact (24%) (Figure 11.4).

Figure 11.4 Female AIDS cases diagnosed through December 2006 by exposure category, San Francisco



12 HIV/AIDS among Adolescents and Young Adults

As of December 31, 2006, a cumulative total of 33 adolescents (age 13-19 years) and 536 young adults (20-24 years) were diagnosed with AIDS in San Francisco (Table 12.1). The characteristics of young adults with AIDS are similar to other adult AIDS cases; the majority of cases are MSM, white, and male. In both adolescents and young adults, MSM IDU is the second most frequent risk group.

Table 12.1 Adolescent and young adult AIDS cases by exposure category, gender, and race/ethnicity, diagnosed through December 2006, San Francisco

	13-19 Years Old (N=33)	20-24 Years Old (N=536)
Exposure Category		
MSM	39%	58%
IDU	0%	10%
MSM IDU	27%	27%
Transfusion/Hemophilia	9%	1%
Heterosexual	12%	4%
Perinatal	3%	0%
Other/Unknown	9%	1%
Gender		
Male	88%	93%
Female	12%	7%
Race/Ethnicity		
White	30%	58%
African American	3%	15%
Latino	58%	20%
Asian/Pacific Islander	3%	5%
Native American	6%	1%

13 HIV/AIDS among Children

HIV/AIDS surveillance data

As of December 31, 2006, a cumulative total of 38 pediatric AIDS cases (less than 13 years old) were diagnosed who resided in San Francisco at the time of diagnosis. The first pediatric case was diagnosed in San Francisco in 1980 and there were only two cases diagnosed before 1987 (Figure 13.1). The number of new pediatric AIDS cases peaked between 1987 and 1991. Between 1992 and 1996 there were 13 pediatric AIDS cases, and five pediatric cases were diagnosed between 1997 and 2003. There were no pediatric AIDS cases diagnosed between 2004 and 2006.

There were a total of 28 living pediatric HIV/AIDS cases as of December 2006. The majority of living pediatric HIV/AIDS cases are children of a high-risk or AIDS-diagnosed parent (Table 13.1). Sixty-four percent of living pediatric cases are female, 93% are children of color.

Figure 13.1 Pediatric AIDS cases by year of diagnosis, San Francisco, 1980-2006

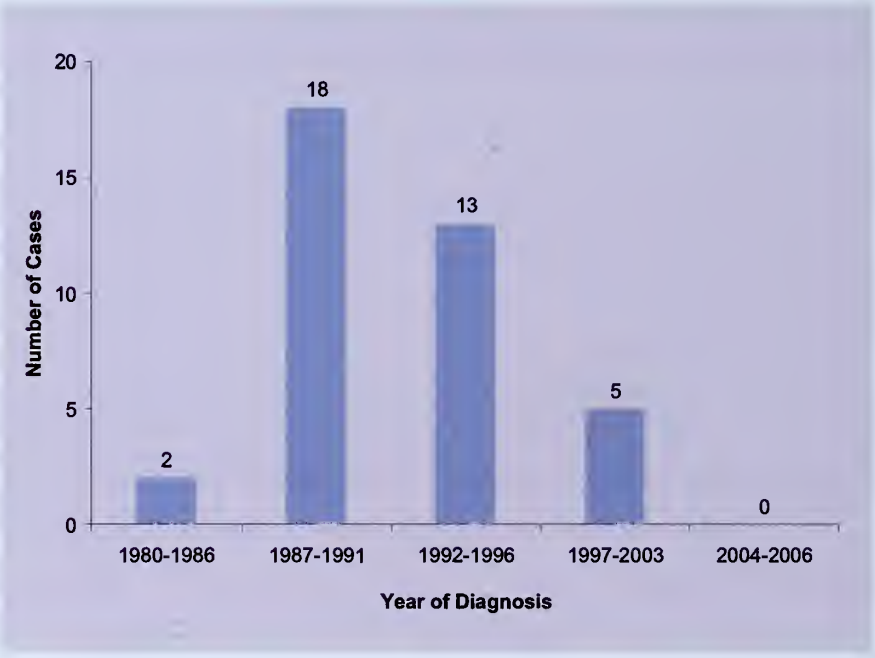


Table 13.1 Living pediatric HIV/AIDS cases by exposure category, gender, and race/ethnicity, San Francisco, December 2006

	N= 28
Exposure Category	
Child of high risk/AIDS parent	89%
Other/Unidentified	11%
Gender	
Male	36%
Female	64%
Race/Ethnicity	
White	7%
African American	29%
Latino	36%
Asian/Pacific Islander	11%
Other/Multirace	17%

Perinatal HIV data

Data on children with HIV in San Francisco are gathered through the Pediatric Spectrum of Disease (PSD) project. The PSD project was established in 1989 by the Centers for Disease Control and Prevention and collects data from eight areas throughout the United States. In Northern California, hospital surveillance for children under 13 years old infected with HIV or infants born to infected mothers has occurred at eight pediatric hospitals (including University of California at San Francisco and San Francisco General Hospital). Records from HIV positive pediatric patients cared for through the California Children's Services program, a state agency providing funding and case management for HIV-positive children, are also included in the PSD project. Data presented here include infants who were San Francisco residents and born to mothers documented to have HIV before delivery without a history of blood or blood product transfusion before 1985.

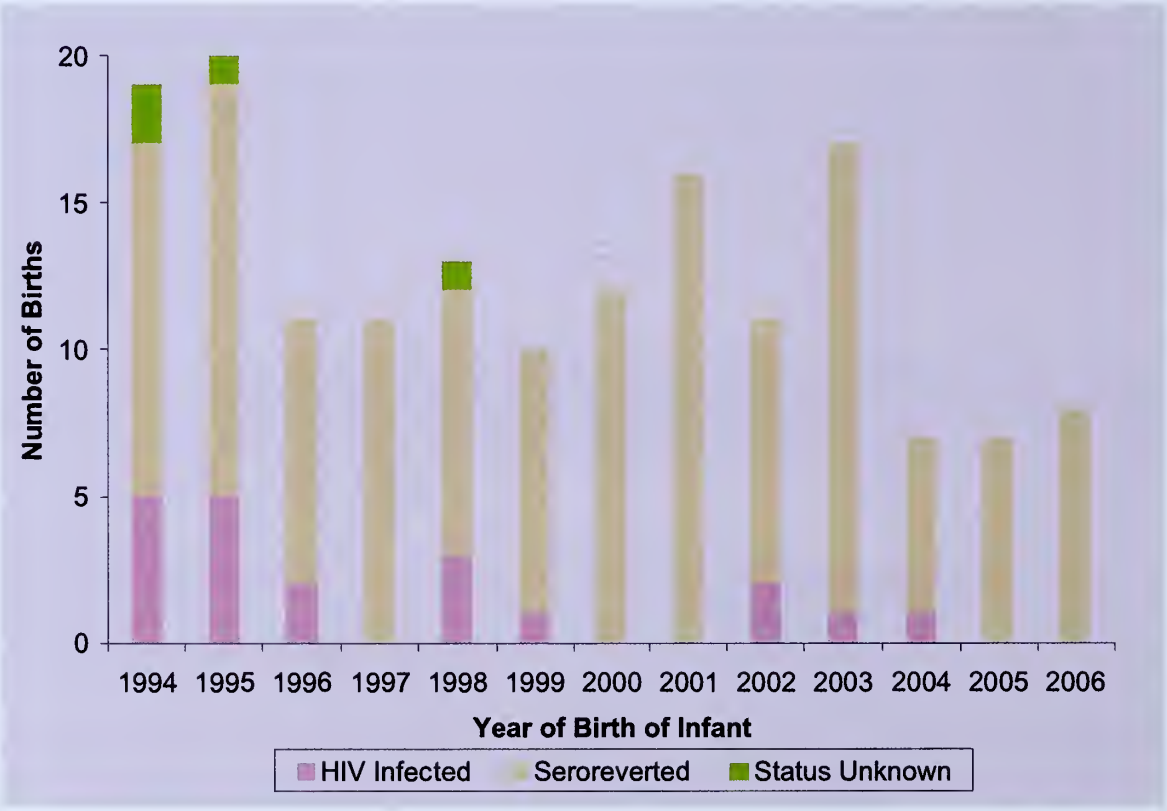
Through December 31, 2006, 300 infants were born to HIV-infected mothers who were residents of San Francisco (Table 13.2). Sixty-two (21%) of these infants were confirmed to be HIV infected, 227 (76%) seroreverted (were determined to be uninfected after maternal antibodies disappeared), and 11 (4%) were of unknown serostatus. Fifty percent of perinatally exposed infants were African American, while whites and Latinos each accounted for 20% and 18% of these infants respectively.

Table 13.2 Infants born to HIV-infected mothers by infant HIV status and race/ethnicity, San Francisco, December 2006

	N (%)
Total	**300**
Infant HIV Status	
HIV-infected	62 (21)
Seroreverted (HIV-)	227 (76)
Unknown	11 (4)
Race/Ethnicity	
White	60 (20)
African American	151 (50)
Latino	55 (18)
Asian/Pacific Islander	21 (7)
Other/Unknown	13 (4)

The number of perinatally exposed infants who were confirmed as HIV-infected has remained low since 1996 (Figure 13.2). Declines in perinatal transmission of HIV are due to the improved therapies for mothers throughout pregnancy and for infants to prevent perinatal transmission. In 2006, eight infants born to HIV-infected mothers have been reported so far; all have seroreverted (i.e., were uninfected).

Figure 13.2 Infants born to HIV-infected mothers by year of birth and infant HIV status, San Francisco, 1994-2006



14 HIV/AIDS among Transgender Persons

Persons are categorized as transgender if information regarding gender identity is present in the medical record. Information on transgender status has been collected since 1996. There were a total of 168 transgender AIDS cases diagnosed between 1997 and 2006, and 124 HIV non-AIDS transgender cases reported thus far (Table 14.1). Transgender HIV/AIDS cases were more likely to be non-white, inject drugs and be younger compared to all HIV/AIDS cases.

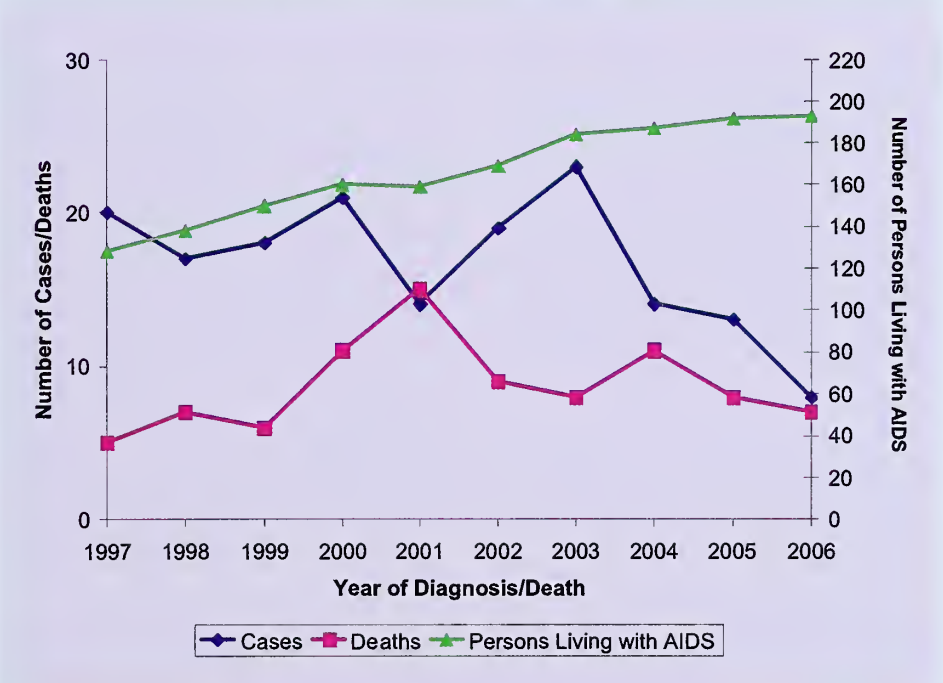
Table 14.1 Characteristics of transgender* HIV/AIDS cases compared to all HIV/AIDS cases, San Francisco

	Transgender AIDS Diagnosed 1997-2006 (N=168)	AIDS Cases Diagnosed 1997-2006 (N=5,260)	All Transgender HIV non-AIDS Cases (N=124)	All HIV non-AIDS Cases (N=6,487)
Race/Ethnicity				
White	28%	59%	19%	63%
African American	32%	19%	45%	15%
Latino	31%	16%	20%	14%
Other/Unknown	9%	6%	16%	9%
Injection Drug Use				
Yes	58%	31%	42%	18%
No	42%	69%	58%	82%
Age at Diagnosis (years)				
13 - 29	17%	9%	37%	20%
30 - 39	43%	39%	36%	44%
40 - 49	31%	35%	23%	27%
50+	9%	17%	4%	9%

* See Technical Notes "Transgender Status."

The number of transgender AIDS cases and deaths is small and fluctuate by year (Figure 14.1). An increasing number of transgenders are living with AIDS as a result of more new AIDS cases compared to new AIDS deaths. As of December 31, 2006 there were 193 transgender persons living with AIDS.

Figure 14.1 AIDS cases, deaths, and prevalence among transgender persons, San Francisco, 1997-2006



15 HIV/AIDS among Homeless Persons

A case is classified as homeless if, at the time of AIDS diagnosis, the medical record states that the patient is homeless or the patient's address is one of the following: (1) a known homeless shelter, (2) a health care clinic, or (3) a free postal address not connected to a residence ('general delivery'). Persons with missing information on residence are not classified as homeless. The number of homeless AIDS cases continues to decline through 2006. The proportion of homeless AIDS among all AIDS cases increased between 1997 and 2000, declined between 2000 and 2005, and increased slightly in 2006 (Figure 15.1). For 2006, 11% of AIDS cases were homeless at the time of diagnosis.

Compared to all HIV/AIDS cases, homeless persons with HIV/AIDS were more likely to be women, African American, injection drug users and younger (Table 15.1).

Figure 15.1 Number and percent of homeless AIDS cases by year of diagnosis, San Francisco, 1997-2006

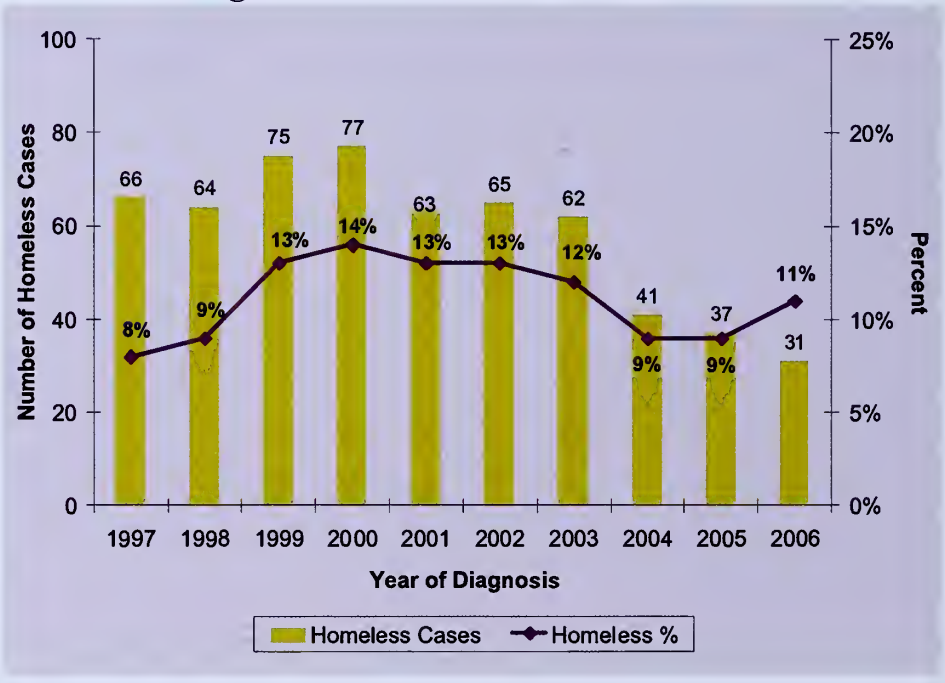


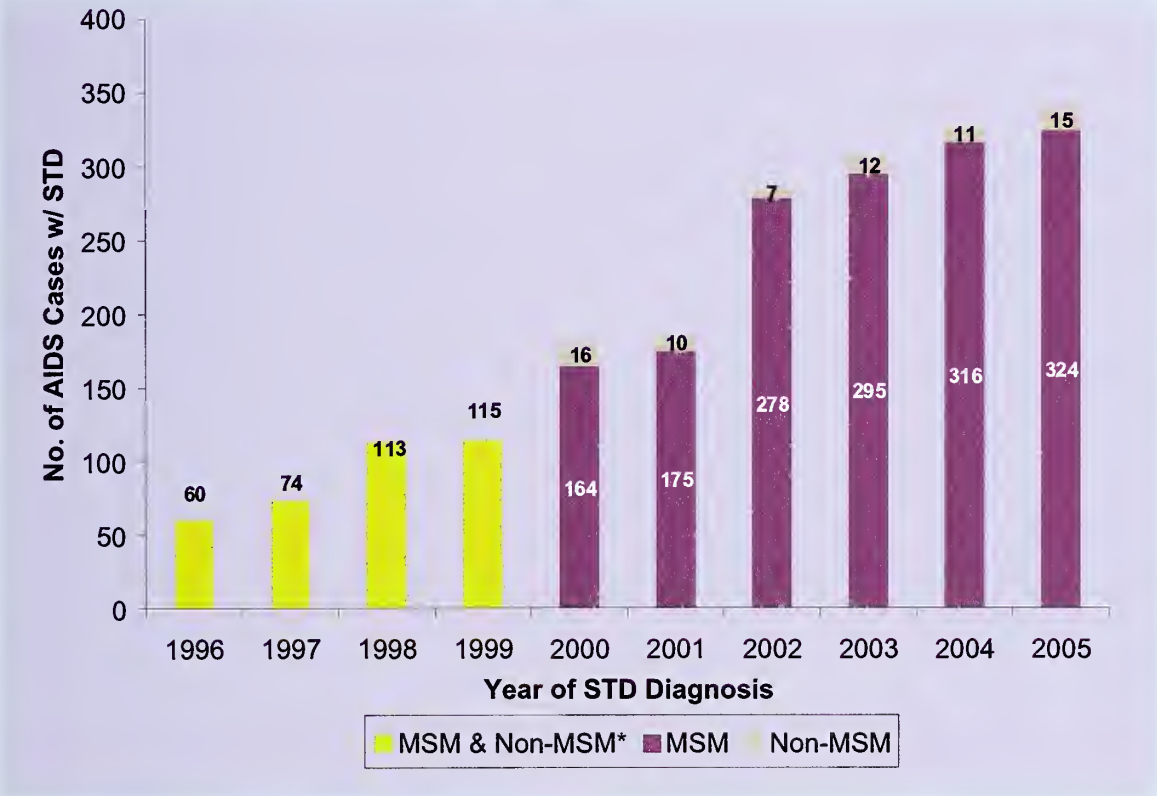
Table 15.1 Characteristics of homeless HIV/AIDS cases compared to all HIV/AIDS cases, San Francisco

	Homeless AIDS Diagnosed 1997-2006 (N=581)	AIDS Cases Diagnosed 1997-2006 (N=5,260)	All homeless HIV-non AIDS (N=353)	All HIV non-AIDS Cases (N=6,487)
Gender				
Male	84%	92%	85%	93%
Female	16%	8%	15%	7%
Race/Ethnicity				
White	42%	59%	44%	63%
African American	40%	19%	36%	15%
Latino	15%	16%	12%	14%
Other	3%	6%	8%	9%
Exposure Category				
MSM	19%	63%	28%	72%
IDU	41%	14%	33%	8%
MSM IDU	34%	17%	26%	10%
Heterosexual	3%	3%	4%	3%
Other/Unidentified	2%	3%	9%	8%
Age at Diagnosis (years)				
0 - 19	1%	<1%	2%	1%
20 - 29	12%	9%	25%	19%
30 - 39	38%	39%	39%	44%
40 - 49	37%	35%	25%	27%
50+	12%	17%	9%	9%

16 Sexually Transmitted Diseases among Persons with AIDS

The occurrence of STD diagnoses among persons living with AIDS is an important marker for sexual risk behavior and potential HIV transmission. Diagnosis of sexually transmitted diseases (STD) occurring among persons with AIDS was determined through a computerized match of the AIDS and STD case registries through 2005. A match was verified by name, date of birth, and gender. The STD registry included persons reported with gonorrhea, chlamydia, non-gonococcal urethritis, or infectious syphilis. Cases of STDs among persons with AIDS have steadily risen since 1996 with a dramatic increase in 2002 (Figure 16.1). This jump in STDs among persons with AIDS could be expected due to steep increases in male rectal gonorrhea (see Figure 8.5) and syphilis (see Figure 8.6), particularly among MSM, reported in 2002. All STDs occurred after the AIDS diagnosis, indicating unprotected sex among persons with known HIV infection.

Figure 16.1 Number of AIDS cases diagnosed with an STD by year of STD diagnosis, San Francisco, 1996-2005



* Prior to 2000, data for MSM and non-MSM was not separated.

17 Late HIV Testing

Persons diagnosed late in the course of HIV infection may be unknowingly transmitting infection and, once diagnosed, may have worse outcomes and greater medical expenses due to late stage of disease. We examined HIV testing histories of persons diagnosed with AIDS in San Francisco to determine the prevalence, trends, and characteristics of persons who were diagnosed with HIV late in the course of disease. Late testers were defined as persons whose diagnosis of HIV occurred 12 months or less before their AIDS diagnosis. Thirty-seven percent of AIDS cases diagnosed between 2002 and 2006 were late testers and this proportion remained relatively stable in recent years (Table 17.1). Late testing was more likely among younger persons, heterosexuals, persons without a reported risk, persons without health insurance, born outside of the USA, and whose initial AIDS diagnosis was an opportunistic infection. Characteristics of late testers suggest that these people may not be aware of their risk for HIV infection or may not have sufficient access to testing services.

Table 17.1 Characteristics of late HIV testers, AIDS cases diagnosed between 2002 and 2006, San Francisco

Characteristic	Total Number	Late tester Number	(%)
Total	**2,148**	**799**	(37.2)
Gender			
Female	172	70	(40.7)
Male	1,899	710	(37.4)
Transgender	77	19	(24.7)
Age at AIDS diagnosis (years)			
13-29	184	100	(54.3)
30-39	750	280	(37.3)
40-49	786	264	(33.6)
50+	428	155	(36.2)
Race/Ethnicity			
White	1,190	397	(33.4)
African American	394	148	(37.6)
Latino	410	178	(43.4)
Other	154	76	(49.4)
Risk group			
MSM	1,349	518	(38.4)
IDU	293	101	(34.5)
MSM IDU	356	83	(23.3)
Heterosexual	80	48	(60.0)
No reported risk	68	49	(72.1)
Insurance at time of AIDS diagnosis			
Public	612	173	(28.3)
Private	849	327	(38.5)
None	652	283	(43.4)
Unknown	35	16	(45.7)
Homeless at time of AIDS diagnosis	213	83	(39.0)
Country of birth			
United States	1,747	616	(35.3)
Outside of USA	298	158	(53.0)
Unknown	103	25	(24.3)
Initial AIDS diagnosis			
Low CD4 count/percent	1,821	615	(33.8)
Opportunistic illness	327	184	(56.3)
Year of AIDS diagnosis			
2002	474	179	(37.8)
2003	517	189	(36.6)
2004	442	168	(38.0)
2005	413	154	(37.3)
2006	302	109	(36.1)

We examined the first CD4 count following HIV diagnosis for persons who had a CD4 test result that occurred within 12 months of their HIV diagnosis among persons diagnosed with HIV/AIDS between 2002 and 2006. The date of the initial HIV diagnosis was based on the earliest date of the HIV antibody test, viral load or CD4 test, antiretroviral treatment start date, or patient self report of HIV positive date. There were 3,527 persons diagnosed with HIV/AIDS during 2002 and 2006 (Table 17.2). For 29% of these, their first CD4 count was less than 350, suggesting a late HIV diagnosis. Forty-eight percent had a CD4 count more than 350, and 23% did not have a CD4 count within 12 months of their HIV diagnosis. Persons who were diagnosed with HIV/AIDS at an older age, African Americans, Latinos, injection drug users, heterosexuals, persons with public insurance, and those born outside of the United States were more likely to have a CD4 count < 350 within 12 months following their HIV diagnosis. These data supplement the late tester data among AIDS cases by including persons with HIV non-AIDS and provide additional evidence of late HIV diagnosis among San Francisco residents.

Table 17.2 Level of first CD4 count within 12 months after HIV diagnosis, HIV/AIDS cases diagnosed in 2002-2006, San Francisco

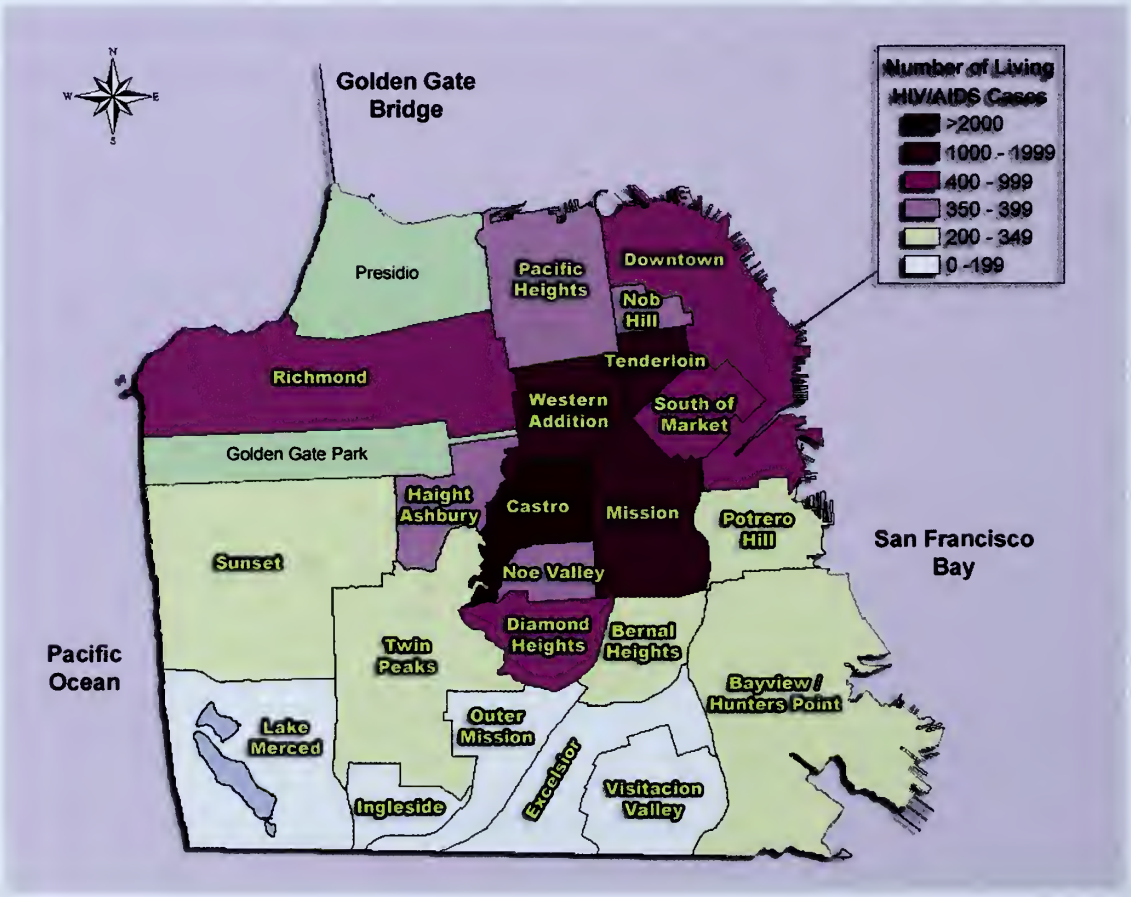
	Number	% of cases whose first CD4 count was less than 350	Median CD4 count
Total	**3,527**	**29%**	**437**
Gender			
Female	277	29%	441
Male	3,162	29%	437
Transgender	88	28%	440
Age at HIV diagnosis (years)			
13-29	729	22%	467
30-39	1,417	28%	459
40-49	973	32%	423
50+	408	41%	348
Race/Ethnicity			
White	1,900	26%	469
African American	581	33%	392
Latino	636	36%	348
Other	410	28%	440
Risk group			
MSM	2,341	29%	444
IDU	342	33%	417
MSM IDU	366	28%	453
Heterosexual	134	46%	309
No reported risk	341	NA*	NA
Insurance status			
Public	446	38%	388
Private	1,384	32%	452
None	1,167	30%	427
Unknown	530	NA	NA
Country of birth			
United States	2,666	29%	448
Outside of USA	465	41%	331
Unknown	396	NA	NA

* NA: Median CD4 and proportion of CD4 count less than 350 are not calculated due to substantial missing CD4 data.

18 Geographic Distribution of HIV/AIDS

Map 18.1 shows the geographic distribution of persons living with HIV/AIDS by neighborhoods in San Francisco. Data include persons who were residents of San Francisco at the time of either their HIV or AIDS diagnosis and who were known to be alive on December 31, 2006. The most severely affected neighborhoods are the Castro, Tenderloin, Western Addition and Mission. The adjacent areas including South of Market, Nob Hill, Haight Ashbury, Noe Valley, Diamond Heights and Bernal Heights also have large numbers of persons living with HIV/AIDS.

Map 18.1 Distribution of persons living with HIV/AIDS, San Francisco, December 2006



Technical Notes

HIV/AIDS Surveillance Methods

San Francisco HIV/AIDS cases are reported primarily through active surveillance activities in which public health personnel review laboratory and pathology reports and medical records to identify cases and complete the case report forms. HIV/AIDS cases are also identified through passive reporting, review of death certificates, validation studies using secondary data sources such as hospital billing records or other disease registries, and reports from other health departments. The surveillance system is evaluated regularly for completeness, timeliness, and accuracy. AIDS case reporting has found to be very complete (over 95%) while HIV case reporting is less complete due to an immature reporting system.

AIDS Incidence Rates

Annual race-specific rates are calculated as the number of cases diagnosed for a particular race/ethnic group during each year divided by the population for that race/ethnicity, multiplied by 100,000. These rates are calculated separately for males and females. The annual populations are not available for transgenders. Population denominators for the years 1997-2006 are obtained from the State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 1990-1999 and 2000-2050 data files, May 2004 (www.dof.ca.gov).

AIDS Survival

Survival was calculated as the time between the date of initial AIDS diagnosis and the date of death. This includes persons with low CD4 (count<200 or percent<14%) and persons diagnosed with AIDS opportunistic illnesses. The follow-up information of cases was obtained through retrospective and prospective reviews of laboratory records and medical charts. Dates of death were obtained through review of local death certificates, reports from the State Office of AIDS, and matches with the National Death Index (NDI). The most recent NDI match included deaths that occurred through December 31, 2004. Persons not known to have died were censored at the date of their last known follow-up or at December 31, 2004, whichever was more recent.

Causes of Death

Cause of death information on death certificates is coded using the International Classification of Diseases, 10th revision (ICD-10) for deaths occurring in 1999 or after, and the 9th revision (ICD-9) for deaths occurring prior to 1999. These codes are then processed and evaluated using a computer system to determine the underlying and contributory causes of death (www.cdc.gov/nchs/about/major/dvs/im.htm). We obtained the ICD coded causes of death from the California multiple-cause-of-death computer tape for persons with AIDS who died prior to 1996. For AIDS deaths that occurred in 1996 and after, the cause

of death information was obtained through the match with the National Death Index. Deaths attributable to HIV infection or AIDS are coded as 042-044 under ICD-9 and B20-B24 under ICD-10. In addition, the AIDS opportunistic illnesses, if listed on death certificates, are included in the category of 'HIV/AIDS' cause of death.

Grouping of Data Categories

Data regarding certain racial/ethnic or risk categories are grouped together when the number of persons with HIV/AIDS in that particular group is small and/or does not present significant trends. For example, "Other" in the Race/Ethnicity breakdown represents Asian/Pacific Islander, Native American and people of mixed race; "Other" in the Exposure Category breakdown may includes transfusion, hemophilia, heterosexual, perinatal AIDS, or persons of unidentified risk.

Transgender Status

In September 1996, the San Francisco Department of Public Health began noting transgender status when this information is contained in the medical record. Transgender individuals are listed as either male-to-female or female-to-male. The majority of transgender HIV/AIDS cases are male-to-female. Please note that there are several limitations of our transgender data. We believe that our report likely underestimated the number of transgender persons affected by HIV/AIDS because data collected for HIV/AIDS reporting are derived from the medical record. Consequently, information that may be discussed with the health care provider but not recorded in the medical record is generally not available for the purposes of HIV/AIDS case reporting. Because information about transgender status was not collected in a uniform way until September 1996, we have limited data on transgender prior to this, and therefore cannot perform valid time trend analysis for this group.

D Data Tables

Figure 1.1 AIDS cases, deaths, and prevalence, San Francisco, 1980-2006 3

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Cases	3	26	99	274	557	859	1236	1629	1762	2161
Deaths	0	8	32	111	272	531	807	876	1036	1273
Persons Living with AIDS	3	21	88	251	536	864	1293	2046	2772	3660

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Cases	2048	2283	2327	2074	1786	1561	1082	806	692	580
Deaths	1362	1495	1633	1584	1584	1475	981	413	395	352
Persons Living with AIDS	4346	5134	5828	6318	6520	6606	6707	7100	7397	7625

	2000	2001	2002	2003	2004	2005	2006
Cases	549	501	487	523	441	408	273
Deaths	340	318	317	298	300	242	197
Persons Living with AIDS	7834	8017	8187	8412	8553	8719	8795

Figure 2.1 Number of AIDS cases by race/ethnicity, San Francisco, 1997-2006 6

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
White	515	443	339	318	291	288	267	243	231	148
African American	146	140	105	111	100	88	101	76	75	52
Latino	110	77	104	87	70	74	115	95	75	49
Other	35	32	32	33	40	37	40	27	27	24

Figure 2.2 Male annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1997-2006 7

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
White	282	233	177	160	147	146	136	121	118	74
African American	354	340	240	259	247	233	249	184	189	121
Latino	170	125	160	127	105	105	166	141	102	72
Other	24	24	22	23	27	24	29	18	16	16

Figure 2.3 Female annual AIDS incidence rates per 100,000 population by race/ethnicity, San Francisco, 1997-2006 7

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
White	6	11	8	11	9	7	5	8	5	4
African American	78	86	75	74	73	47	73	61	51	41
Latina	16	6	14	17	8	9	9	13	15	7
Other	5	2	3	1	3	3	2	1	4	2

Figure 2.4 Number of male AIDS cases by exposure category, San Francisco, 1997-2006 8

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
MSM	548	433	353	325	301	297	327	277	240	159
IDU	76	59	48	53	42	42	56	27	35	19
MSM IDU	102	127	93	86	75	80	60	67	60	42
Other	11	6	20	12	25	14	19	16	24	20

Figure 2.5 Number of female AIDS cases by exposure category, San Francisco, 1997-2006 8

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
IDU	31	34	34	36	29	23	24	28	19	16
Heterosexual	13	12	12	14	10	9	11	8	12	7
Other	5	4	2	2	5	3	3	4	5	2

Figure 5.2 Leading causes of death among San Francisco male residents aged 25-54 years, 1999 - 2003 23

	1999	2000	2001	2002	2003
HIV/AIDS	167	162	162	145	140
Heart disease	95	80	91	104	107
Accident	130	113	113	94	95
Non-AIDS cancer	120	107	109	90	89
Suicide	43	42	43	42	57
Homicide	23	20	26	19	27
Liver disease	29	34	37	24	26
Mental disorder	22	35	50	50	47
Cerebrovascular	10	20	12	15	15
COPD	11	14	13	10	9

Figure 5.3 Leading causes of death among San Francisco female residents aged 25-54 years, 1999-2003 24

	1999	2000	2001	2002	2003
Non-AIDS cancer	66	69	69	69	78
Mental disorder	5	10	7	12	16
Heart disease	28	32	27	31	30
Cerebrovascular	12	8	2	11	13
COPD	6	10	5	6	6
Liver disease	9	5	9	13	4
Accident	40	27	37	22	27
Suicide	5	9	15	9	14
Homicide	7	5	11	6	4
HIV/AIDS	30	25	24	25	28

Figure 5.4 Leading causes of death rates per 100,000 population among San Francisco male residents aged 25-54 years by race/ethnicity, 2003 25

	White	African American	Latino
HIV/AIDS	76	168	52
Heart disease	36	286	24
Non-AIDS cancer	35	98	24
Accident	45	91	36

Figure 5.5 Leading causes of death rates per 100,000 population among San Francisco male residents aged 15-64 years by age group, 2003 25

	15-19	20-24	25-34	35-44	45-54	55-64
HIV/AIDS	0	0	13	71	116	94
Heart disease	0	0	4	30	131	298
Accident	26	16	32	40	56	59
Non-AIDS cancer	0	5	6	16	120	338
Mental disorder	7	0	4	12	56	64
Suicide	7	16	19	23	35	19

Figure 7.1 Trends in insurance status among persons with AIDS by gender, San Francisco, 2001-2006 28

Male	2001	2002	2003	2004	2005	2006
Public	18%	21%	22%	25%	30%	26%
Private	42%	42%	43%	45%	44%	44%
None	35%	33%	34%	27%	25%	25%

Female	2001	2002	2003	2004	2005	2006
Public	59%	40%	55%	65%	58%	76%
Private	16%	11%	11%	8%	17%	16%
None	20%	43%	32%	25%	25%	8%

Transgender	2001	2002	2003	2004	2005	2006
Public	29%	26%	39%	64%	62%	88%
Private	0%	16%	4%	0%	0%	0%
None	71%	53%	52%	36%	38%	13%

Figure 8.1 AIDS cases, deaths, and prevalence among MSM, San Francisco, 1997-2006 30

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Cases	668	577	464	430	390	395	410	358	313	209
Deaths	337	319	282	276	245	245	228	228	175	153
Persons Living with AIDS	6234	6492	6674	6828	6973	7123	7305	7435	7573	7629

Figure 8.2 AIDS cases among MSM by race/ethnicity, San Francisco, 1997-2006 . .30

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
White	473	401	295	281	257	255	233	222	199	131
African American	77	76	58	52	47	44	51	37	40	24
Latino	92	72	84	70	56	66	97	79	58	36
Other	26	28	27	27	30	30	29	20	16	18

Figure 8.3 Percent of MSM reporting unprotected anal intercourse in the last six months by self-reported HIV status, the Stop AIDS Project, San Francisco, 1999-2006 31

	1999	2000	2001	2002	2003	2004	2005	2006
HIV Positive	42%	46%	51%	45%	53%	54%	46%	57%
HIV Negative	32%	36%	37%	32%	37%	33%	37%	44%

Figure 8.4 Percent of MSM reporting unprotected anal intercourse in the last six months with at least one partner of unknown HIV status, the Stop AIDS Project, San Francisco, 1999-2006 31

	1999	2000	2001	2002	2003	2004	2005	2006
HIV Positive	25%	25%	31%	27%	28%	21%	9%	13%
HIV Negative	15%	17%	20%	16%	8%	4%	12%	10%

Figure 8.6 Syphilis among MSM, San Francisco, 1997-2006 33

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Primary	2	3	3	13	45	97	105	117	71	75
Secondary	13	2	19	27	72	191	213	204	145	142
Early Latent	2	4	10	12	38	151	160	173	155	149

Figure 9.1 AIDS cases, deaths, and prevalence among non-MSM IDU, San Francisco, 1997-2006 34

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Cases	108	93	82	91	71	66	80	55	54	35
Deaths	62	65	63	51	60	58	60	59	52	36
Persons Living with AIDS	669	697	716	756	767	775	795	791	793	792

Figure 9.2 AIDS cases among non-MSM IDU by race/ethnicity, San Francisco, 1997-2006 34

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
White	36	35	37	32	28	25	30	16	26	11
African American	56	53	37	48	36	36	34	29	22	17
Latino	12	4	5	8	5	2	12	8	5	7
Other	4	1	3	3	2	3	4	2	1	0

Figure 10.1 AIDS cases, deaths, and prevalence among heterosexuals, San Francisco, 1997-2006 36

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Cases	16	13	18	18	16	14	18	16	19	15
Deaths	9	3	4	4	8	9	6	5	5	4
Persons Living with AIDS	107	117	131	145	153	158	170	181	195	206

Figure 10.2 AIDS cases among heterosexuals by race/ethnicity, San Francisco, 1997-2006 36

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
White	3	5	3	3	2	4	3	4	1	2
African American	6	7	8	9	9	5	11	5	9	6
Latino	4	0	6	5	2	2	3	5	6	4
Other	3	1	1	1	3	3	1	2	3	3

Figure 10.3 HIV prevalence rate among blood donations and donors through 2006, San Francisco Bay Area 37

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
HIV prevalence rate per 100,000 donations	111	45	33	26	11	13	10	8	4	7	5

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
HIV prevalence rate per 100,000 donations	3	6	5	2	2	1	4	6	2	1	2
HIV prevalence rate per 100,000 donors				4	4	2	7	10	3	2	3

Figure 11.1 AIDS cases, deaths, and prevalence among women, San Francisco, 1997-2006 39

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Cases	49	50	48	52	44	36	38	40	36	25
Deaths	24	23	33	25	26	29	28	23	24	23
Persons Living with AIDS	368	395	410	437	455	462	472	489	501	503

Figure 11.2 Female AIDS cases by race/ethnicity, San Francisco, 1997-2006 39

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
White	9	17	13	18	14	13	8	13	8	6
African American	26	28	24	23	22	14	22	18	15	12
Latina	8	3	7	9	4	5	5	7	8	4
Other	6	2	4	2	4	4	3	2	5	3

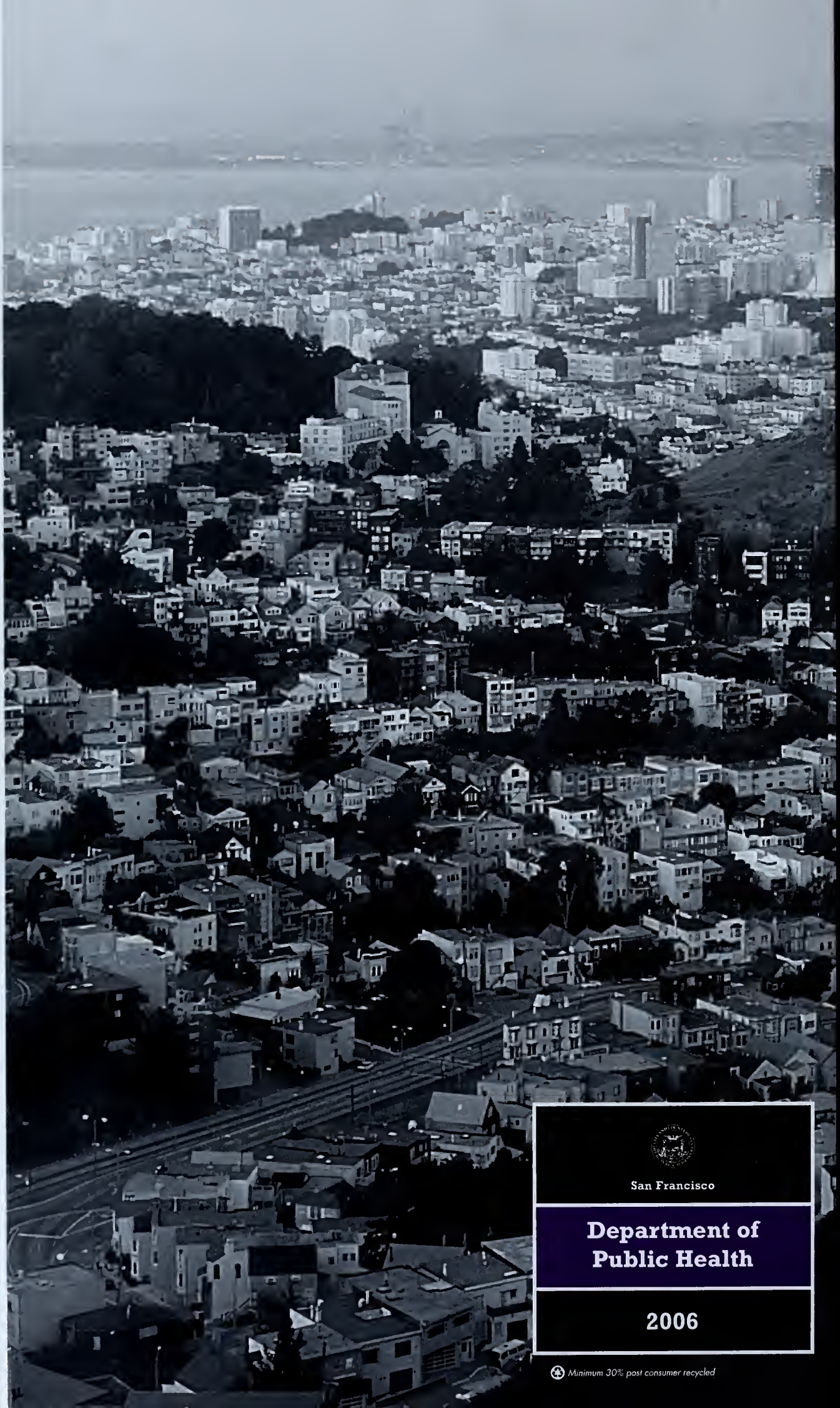
Figure 13.2 Infants born to HIV-infected mothers by year of birth and infant HIV status, San Francisco, 1994-2006 44

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
HIV Infected	5	5	2	0	3	1	0	0	2	1	1	0	0
Seroreverted	12	14	9	11	9	9	12	16	9	16	6	7	8
Status Unknown	2	1	0	0	1	0	0	0	0	0	0	0	0

Figure 14.1 AIDS cases, deaths, and prevalence among transgender persons, San Francisco, 1997-2006 45

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Cases	20	17	18	21	14	19	23	14	13	8
Deaths	5	7	6	11	15	9	8	11	8	7
Persons Living with AIDS	128	138	150	160	159	169	184	187	192	193

975096



San Francisco

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